

**SCS ENGINEERS**

## **Groundwater Monitoring Report: Fourth Quarter 2005**

**Schmidbauer Lumber, Inc.  
1099 Waterfront Drive  
Eureka, California  
1NHU602**

**File Number 01203316.00**

**Prepared by:**

**SCS Engineers  
434 7<sup>th</sup> Street, Suite B  
Eureka, California 95501**

**To:**

**Kasey Ashley  
North Coast Regional Water Quality Control Board  
5550 Skylane Boulevard, Suite A  
Santa Rosa, California**

**7 March 2005**

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## LIMITATIONS/DISCLAIMER

This report has been prepared for Schmidbauer Lumber Company, Inc. with specific application to a quarterly monitoring event for the property located at 1099 Waterfront Drive, Eureka, California (the "Site"). Field activities and sampling were conducted in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, either expressed or implied, is made as to the professional advice presented herein.

Access to the Property was limited by buildings, automotive traffic, underground and aboveground utilities, and other miscellaneous site features. Therefore, the field exploration and points of subsurface observation were somewhat restricted.

Changes in site use and conditions may occur due to variations in rainfall, temperature, water usage, or other factors. Additional information which was not available to the consultant at the time of this quarterly monitoring event or changes which may occur on the site or in the surrounding area may result in modification to the site that would impact the summary presented herein. This report is not a legal opinion.

We look forward to continuing to work with you on this project and trust this report provides the information you require at this time. If you have any questions or need additional information, please call SCS at 707.476.1590.

*1LL*

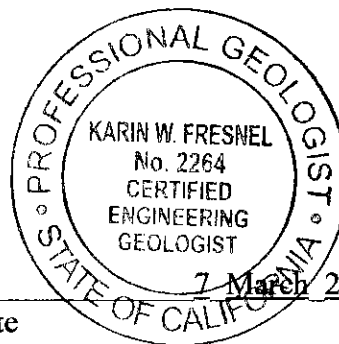
Kevin Coker  
Project Scientist, REA #7887

*3808*

Date  
Expires 30 June 2006

*KW Fresnel*

Karin W. Fresnel  
Certified Engineering Geologist #2264



Date  
Expires 31 August 2007

## **Introduction**

SCS Engineers (SCS) is pleased to present the results for the fourth quarter 2005 groundwater monitoring and sampling event at the Schmidbauer Lumber, Inc. (Schmidbauer) site located at 1099 Waterfront Drive in the City of Eureka, California. A summary of historical site investigation activities is presented in previous reports (PNEG, 1998a, 1999a, & 2001c; SCS, 2003b, 2004b, 2005a, and 2006a). The site location is as shown on the attached Site Location Map (Figure 1). General site features are as shown on the attached Site Plan (Figure 2).

## **Groundwater Monitoring**

Depth to groundwater measurements were collected from monitoring wells MW-1, MW-2, MW-3R, MW-4, MW-5, MW-6, MW-7, MW-8D, MW-9D, MW-10, MW-11, MW-12 and MW-13 on 9 December 2005 in order to determine groundwater flow direction and gradient at the site. Depth to groundwater in the shallow wells ranged from approximately 2.03 to 4.45 feet below existing grade.

The depths to groundwater in the deep wells (MW-2, MW-8D, and MW-9D) were 5.74 to 7.30 feet below existing grade. The depth to groundwater measurements and well casing elevations were used to calculate the groundwater flow direction and gradient at the Site. Casing and groundwater elevations are reported in feet relative to mean sea level. Depths to groundwater are expressed in feet. The site-wide or regional (MW-3R, MW-4, MW-5) shallow groundwater flow direction was interpolated to be west-northwest (Figure 3, and Chart 1) at a calculated gradient of 0.001. The localized (MW-1, MW-6, MW-7) shallow groundwater flow direction and gradient was interpolated to be westerly at a calculated gradient of 0.003 (Figure 4, and Chart 2). The deep flow direction (MW-2, MW-8D, MW-9D) was interpolated to be west-northwest (Figure 5 and Chart 3) at a calculated gradient of 0.03. Groundwater flow and gradient inclusive of newly installed wells MW-10, MW-11, MW-12 and MW-13 indicate south to west-southwest flow direction at an average gradient of 0.015 (Figure 6). Groundwater flow direction and gradient for this and previous monitoring events are presented in Tables 1A, 1B, and 1C (attached).

## **Groundwater Sampling**

Monitoring wells were checked for the presence of immiscible product using an oil/water interface probe. Immiscible product was not present during this monitoring event. Wells scheduled for sampling were purged of approximately three (3) wetted well casing volumes, or at least five (5) gallons of groundwater, whichever was greater, or until the well went dry, using a submersible pump. Temperature, pH, conductivity, turbidity, and dissolved oxygen readings were measured during purging to determine that groundwater representative of aquifer conditions was entering the well casings for sampling. Wells were allowed to recover to 80 percent of static levels or for 2 hours prior to sampling. Groundwater samples were collected using a clean, disposable bailer for each well. Samples were transferred to appropriate laboratory-supplied containers for analysis. Groundwater samples were labeled, stored under refrigerated conditions, and transported under Chain-of-Custody documentation to Analytical Sciences (AS), a California Department of Health Services-certified laboratory, in Petaluma, California. All samples were collected in accordance with the SCS' Standard Soil and Water Sampling Procedures and QA/QC Protocol. Water generated during recent site investigative activities is currently stored at the site in 55-gallon UN/DOT-

approved 17-E/H drums, pending characterization and disposal. Information related to well purging was recorded on groundwater field sampling forms. Well Purge Records are presented in Appendix A.

### **Laboratory Analysis**

Groundwater samples collected from MW-1 through MW-13 were analyzed for chlorophenols using the Canadian Pulp Method. The Canadian Pulp Method was developed specifically to test for chlorophenols in samples with high wood sugars. This method is accepted by the North Coast Regional Water Quality Control Board (NCRWQCB) and by the Department of Toxic Substances Control DTSC. One sample from well MW-10 was analyzed for the presence of dioxins and furans by EPA Test Method 1613 D/F as requested by the NCRWQCB.

### **Laboratory Analytical Results**

Laboratory analyses of groundwater samples from wells MW-8D, MW-9D, MW-10 and MW-11 indicated the presence of chlorophenols in groundwater. Analysis of the groundwater sample from MW-10 indicated the presence of dioxins and furans. All other groundwater samples analyzed for this monitoring event were below laboratory minimum detection limits (MDLs) for target analytes. Recent analytical results are incorporated with historical data in Tables 2 through 15 and plotted on the attached time versus concentration diagram (See Diagram A). A copy of the laboratory report is also attached (Appendix B).

### **Discussion**

Groundwater analytical results indicated the presence of chlorophenols in groundwater samples from wells MW-10 and MW-11. Chlorophenol concentrations in these wells have declined since the initial sampling event in October 2005. These wells are proximal and downgradient from the former wood treatment area. Dioxins and furans were present in the sample from MW-10 which is located adjacent to the former wood treatment facility.

Samples from deep wells MW-8D and MW-9D contained low levels of chlorophenols. This represents the second detection of chlorophenols in these wells since installation of the wells in October 2003 and February 2004, respectively. This may be related to recent heavy rains. It should also be noted that these wells were sampled after well MW-10, where high concentrations of chlorophenols were present. Field technicians have been instructed to sample historically clean wells prior to wells where chlorophenols were noted in previous events.

A groundwater mound exists between Mill #1 and Mill #2 (Figure 2). A localized groundwater flow plate has been prepared for this area (Figure 4).

### **Project Update**

The next monitoring event is scheduled for March 2006.

### **Soil and Water Disposal**

On 19 January 2006 Integrated Wastestream Management transported 4 drums of non-hazardous water to Seaport Refining & Environmental disposal facility in Redwood City, California and 3 drums of non-hazardous soil to Republic Services Vasco Road Landfill in Livermore, California. Copies of the Certificates of Disposal are presented in Appendix C.

## **Attachments**

### **Figures**

- Figure 1: Site Location Map  
Figure 2: Site Plan  
Figure 3: Groundwater Flow Direction and Gradient: Sitewide Shallow Wells (MW-3R, MW-4 & MW-5): 12/05/05  
Figure 4: Groundwater Flow Direction and Gradient: Local Shallow Wells (MW-1, MW-6, & MW-7): 12/05/05  
Figure 5: Groundwater Flow Direction and Gradient: Deep Wells (MW-2, MW-8D, MW-9D): 12/05/05  
Figure 6: Groundwater Flow Direction and Gradient: Shallow Wells: 12/05/05  
Figure 7: Pentachlorophenol in Groundwater: Shallow Wells: 12/05/05  
Figure 8: Pentachlorophenol in Groundwater: Deep Wells: 12/05/05

### **Charts**

- Chart 1: Windrose Diagram: Shallow Monitor Wells - 3/99 through 12/05  
Chart 2: Windrose Diagram: Shallow Monitor Wells - 5/01 through 12/05  
Chart 3: Windrose Diagram: Deep Monitor Wells - 3/99 through 12/05

### **Tables and Diagrams**

Key and Footnotes to Diagram and Tables

- Diagram A: Contaminant Concentration & Groundwater Elevation vs. Time – MW-1  
Table 1A: Groundwater Flow Direction and Gradient for Shallow Wells: Site Wide  
Table 1B: Groundwater Flow Direction and Gradient for Shallow Wells: Local (MW-1, MW-6, and MW-7 only)  
Table 1C: Groundwater Flow Direction and Gradient for Deep Wells (MW-2, MW-8D, and MW-9D)  
Tables 2-15: Groundwater Analytical Results: MW-1 through MW-13  
Table 16: Groundwater Analytical Results: Trihalomethanes: June 2005  
Table 17: Groundwater Analytical Results: Dioxins and Furans

### **Appendices**

- Appendix A: Well Purge Records 4th Quarter  
Appendix B: Analytical Laboratory Reports:  
    Analytical Sciences Report #5120801, dated 19 December 2005  
    Frontier Analytical Laboratory Report #3646, dated 28 December 2005  
    Analytical Sciences Report #5121202, dated 12 January 2006  
Appendix C: Certificate of Disposal: IWM Job # 95579-DS: dated 19 January 2006  
    Certificate of Disposal: IWM Job # 95589-DW: dated 19 January 2006

## **References**

- Environmental Resources Management, 1998, MW-14 Sampling Results, Schmidbauer Lumber Inc., Foot of Clark St., Eureka, California, September 4.
- Reactions and Movement of Organic Chemicals in Soils, Soil Science Society of America, 1989
- PNEG, 1997, Work Plan for Subsurface Investigation - Schmidbauer Lumber Inc., Foot of Clark St., Eureka, California, January 27.
- \_\_\_\_\_, 1998a, Report on Subsurface Investigation - Schmidbauer Lumber Inc., Foot of Clark St., Eureka, California, May 22.
- \_\_\_\_\_, 1998b, Work Plan for Monitoring Well Installation - Schmidbauer Lumber Inc., Foot of Clark St., Eureka, California, December 10.
- \_\_\_\_\_, 1999a, Report of Investigation - Schmidbauer Lumber Inc., Foot of Clark St., Eureka, California, August 30.
- \_\_\_\_\_, 1999b, Results of the June 1999 Quarterly Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, September 14.
- \_\_\_\_\_, 1999c, Results of the September 1999 Quarterly Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, November 15.
- \_\_\_\_\_, 2000a, Results of the December 1999 Quarterly Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, March 8.
- \_\_\_\_\_, 2000b, Results of the March 2000 Quarterly Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, May 23.
- \_\_\_\_\_, 2000c, Results of the 2nd Quarter 2000 Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, July 26.
- \_\_\_\_\_, 2000d, Work Plan for Installation of Peripheral Monitoring Wells and for Feasibility Study for Site Remediation by Phytoremediation - Schmidbauer Lumber, Inc., Foot of Clark Street, Eureka, California, September 12.
- \_\_\_\_\_, 2000e, Results of the 3rd Quarter 2000 Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, October 31.
- \_\_\_\_\_, 2001a, Results of the 4th Quarter 2000 Groundwater Monitoring Event at the Foot of Clark St., Eureka, California, January 22.
- \_\_\_\_\_, 2001b, Work Plan for Phytoremediation Pilot Study - Schmidbauer Lumber, Inc., Foot of Clark Street, Eureka, California, March 8.
- \_\_\_\_\_, 2001c, Report on Installation of Monitoring Wells - Schmidbauer Lumber Inc., Foot of Clark St., Eureka, California, March 29.
- \_\_\_\_\_, 2001d, Report on Results of the 2nd Quarter 2001 Quarterly Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., Foot of Clark Street, Eureka, California, July 7.
- \_\_\_\_\_, 2001e, Results of the 3rd Quarter 2001 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., Foot of Clark Street, Eureka, California, October 29.
- \_\_\_\_\_, 2002a, Results of the 4th Quarter 2001 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, January 17.
- \_\_\_\_\_, 2002b, Work Plan for Installation of Additional Deep Monitoring Wells and Additional Shallow Borings - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, April 29.

- \_\_\_\_\_, 2002c, Results of the 1st Quarter 2002 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, May 20.
- \_\_\_\_\_, 2002d, Results of the 2nd Quarter 2002 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, July 3.
- \_\_\_\_\_, 2002e, Results of the 3rd Quarter 2002 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, September 25.
- \_\_\_\_\_, 2002f, Results of the 4th Quarter 2002 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, December 23.
- \_\_\_\_\_, 2003a, Results of the 1st Quarter 2003 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, March 17.
- \_\_\_\_\_, 2003b, Results of the 2nd Quarter 2003 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, June 23.
- SCS, 2003a, Results of the 3rd Quarter 2003 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, September 30.
- \_\_\_\_\_, 2003b, Results of Monitoring Well Installation and Drilling of Additional Borings - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, November 20.
- \_\_\_\_\_, 2004a, Results of the 4<sup>th</sup> Quarter 2003 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, January 14.
- \_\_\_\_\_, 2004b, Results of Monitoring Well Installation and Drilling of Additional Borings (Revised, 11/20/03) and Results of Additional Deep Monitoring Well Installation - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, April 12.
- \_\_\_\_\_, 2004c, Results of the 2<sup>nd</sup> Quarter 2004 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, July 20.
- \_\_\_\_\_, 2004d, Correction to the Results of the 2nd Quarter 2004 Groundwater Monitoring and Sampling Event report, dated July 20, 2004, for the Schmidbauer Lumber, Inc. site at 1099 Waterfront Drive, Eureka, California, July 29.
- \_\_\_\_\_, 2004e, Results of the 4<sup>th</sup> Quarter 2004 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California, December 2.
- \_\_\_\_\_, 2005a, Report of Findings: Groundwater Flow Direction Analysis and Review, Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California.
- \_\_\_\_\_, 2005b, Results of the 1<sup>st</sup> Quarter 2005 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California.
- \_\_\_\_\_, 2005c, Results of the 2<sup>nd</sup> Quarter 2005 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California.
- \_\_\_\_\_, 2005d, Workplan: Subsurface Investigation, Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California.
- \_\_\_\_\_, 2005e, Groundwater Monitoring Report: Third Quarter 2005 Groundwater Monitoring and Sampling Event - Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California.
- \_\_\_\_\_, 2006a, Report of Findings: Additional Subsurface Investigation, Schmidbauer Lumber, Inc., 1099 Waterfront Drive, Eureka, California.

**Distribution List**  
**File No. 01203316.00**

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Humboldt County Division of Environmental Health  
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## Figures



Source of Base Map: DELORME 2000®



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PROJ. NO: 01203316.00	TAKEN BY:	FILE: 3316SiteLocMap
DATE: 3/2/06	CREATED BY JJM	APP. BY: KWF

## SITE LOCATION MAP

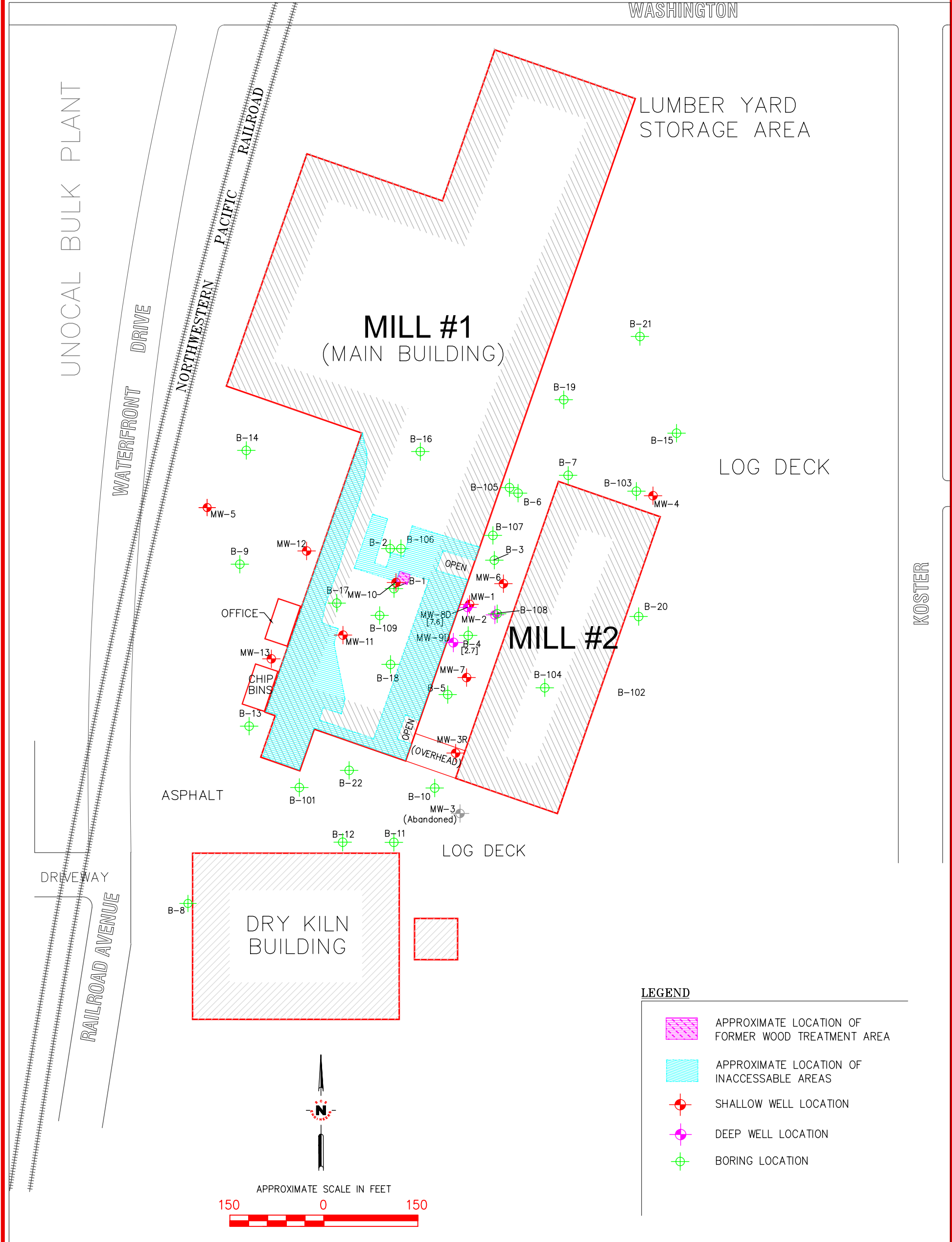
SCHMIDBAUER LUMBER COMPANY  
1099 WATERFRONT DRIVE  
EUREKA, CALIFORNIA

APPROX. SCALE



FIGURE:

1

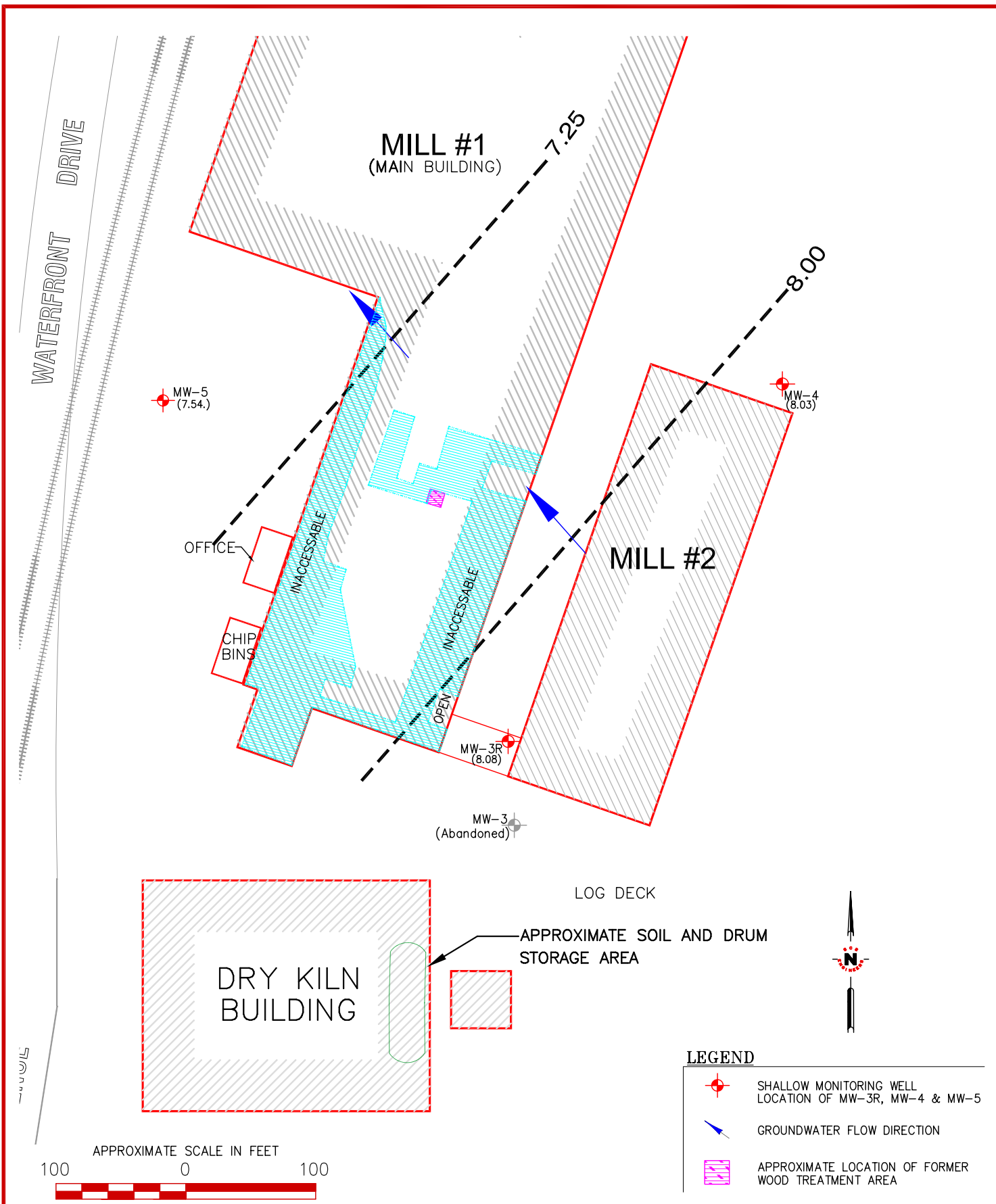


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PROJ. NO. 0120316.00	DWN. BY: JJM	ACAD FILE: 0120316.00
DATE 3/1/06	CHK. BY: KWF	APP. BY: KWF

SHEET TITLE SITE PLAN	SCHMIDBAUER LUMBER COMPANY 1099 WATERFRONT DRIVE EUREKA, CALIFORNIA
PROJECT TITLE	

SCALE: 1" = 150'
FIGURE NO. 2



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PROJ. NO.	01203316.00	DWN. BY:	JJM	ACAD FILE:	1203316_GWFLO_2-06
DATE	2/24/06	CHK. BY:	KWF	APP. BY:	KWF

### SHEET TITLE:

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SITEWIDE SHALLOW WELLS (MW-3R, MW-4 & MW-5): 12/05/05

### PROJECT TITLE:

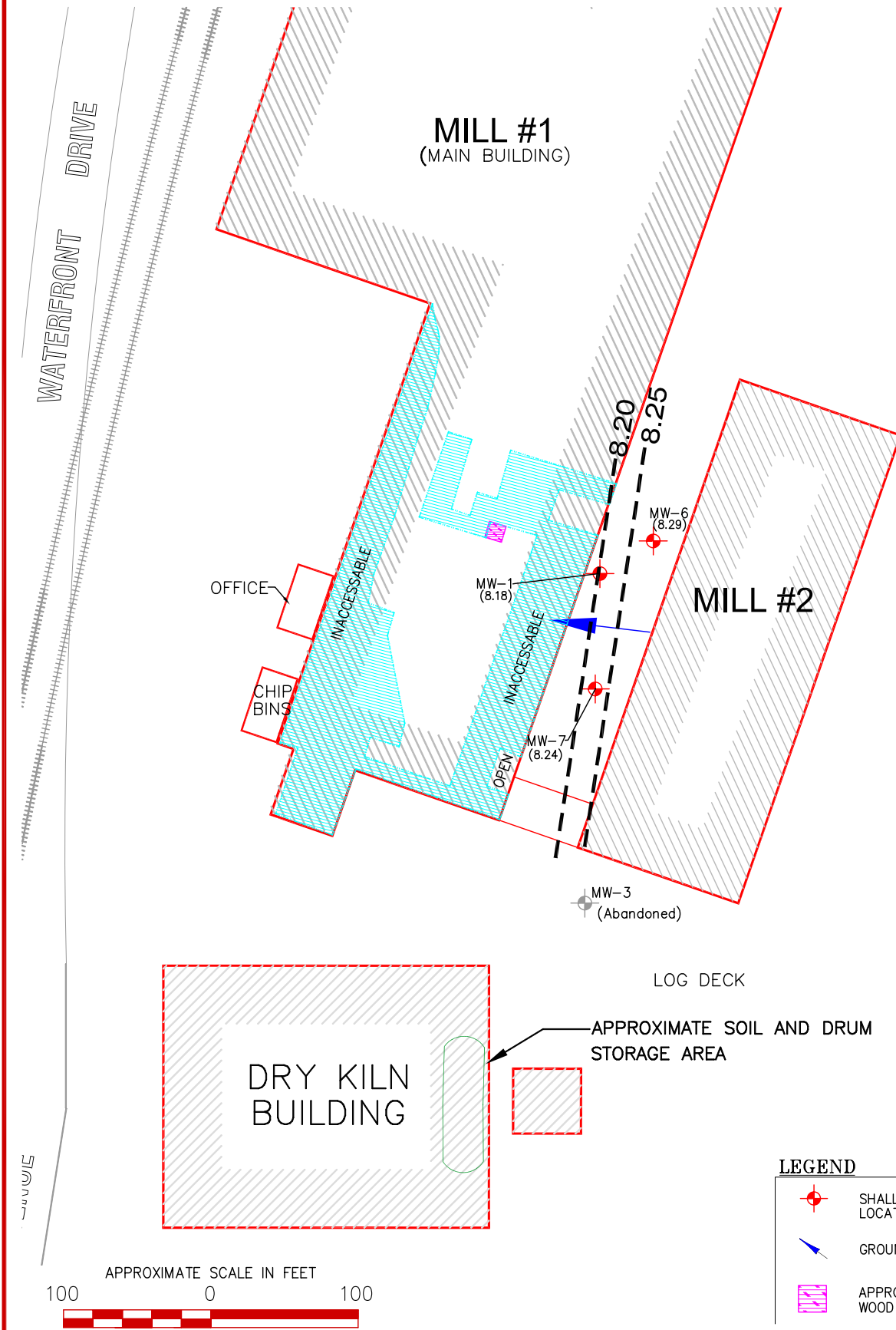
SCHMIDBAUER LUMBER, INC.  
1099 WATERFRONT DRIVE  
EUREKA, CALIFORNIA

### SCALE:

1" = 100' +/-

### FIGURE NO.

3



<b>SCS ENGINEERS</b> ENVIRONMENTAL CONSULTANTS 3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 94503 PH. (707) 946-5461 FAX. (707) 544-5769			SHEET TITLE: GROUNDWATER FLOW DIRECTION AND GRADIENT: LOCAL SHALLOW WELLS (MW-1, MW-6 & MW-7): 12/05/05	SCALE: 1" = 100' +/-
PROJ. NO. 01203316.00 DATE 2/24/06			PROJECT TITLE: SCHMIDBAUER LUMBER, INC. 1099 WATERFRONT DRIVE EUREKA, CALIFORNIA	FIGURE NO. 4
DWN. BY: JJM CHK. BY: KWF	ACAD. FILE: 1203316_GWFLO_2-06 APP. BY: KWF			

UNOCAL BLVD

WATERFRONT DRIVE

MILL #1  
(MAIN BUILDING)

OFFICE

CHIP  
BINS

INACCESSIBLE

INACCESSIBLE

OPEN (8.24)

4.00  
4.50

MILL #2

MW-3  
(Abandoned)

ALLEYWAY

ALLEYWAY

DRY KILN  
BUILDING

LOG DECK

APPROXIMATE SOIL AND DRUM  
STORAGE AREA



LEGEND



DEEP MONITORING WELL  
LOCATION OF MW-2, MW-8D & MW-9D



GROUNDWATER FLOW DIRECTION



APPROXIMATE LOCATION OF FORMER  
WOOD TREATMENT AREA

APPROXIMATE SCALE IN FEET

100 0 100



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PROJ. NO.	01203316.00	DWN. BY:	JJM	ACAD FILE:	1203316_GWFLO_2-06
DATE	2/24/06	CHK. BY:	KWF	APP. BY:	KWF

SHEET TITLE:

GROUNDWATER FLOW DIRECTION AND GRADIENT:  
DEEP WELLS (MW-2, MW-8D, MW-9D): 12/5/05

PROJECT TITLE:

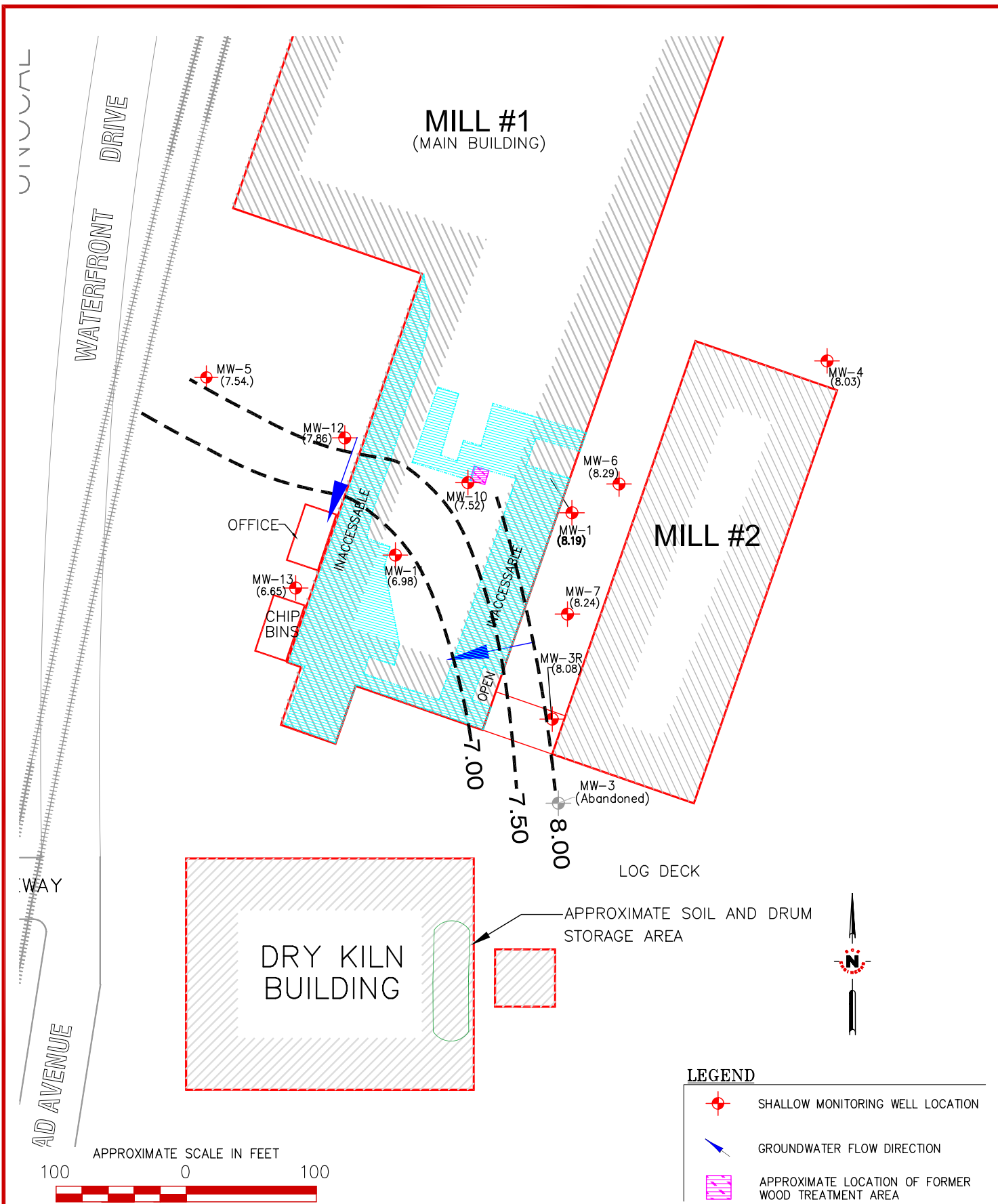
SCHMIDBAUER LUMBER, INC.  
1099 WATERFRONT DRIVE  
EUREKA, CALIFORNIA

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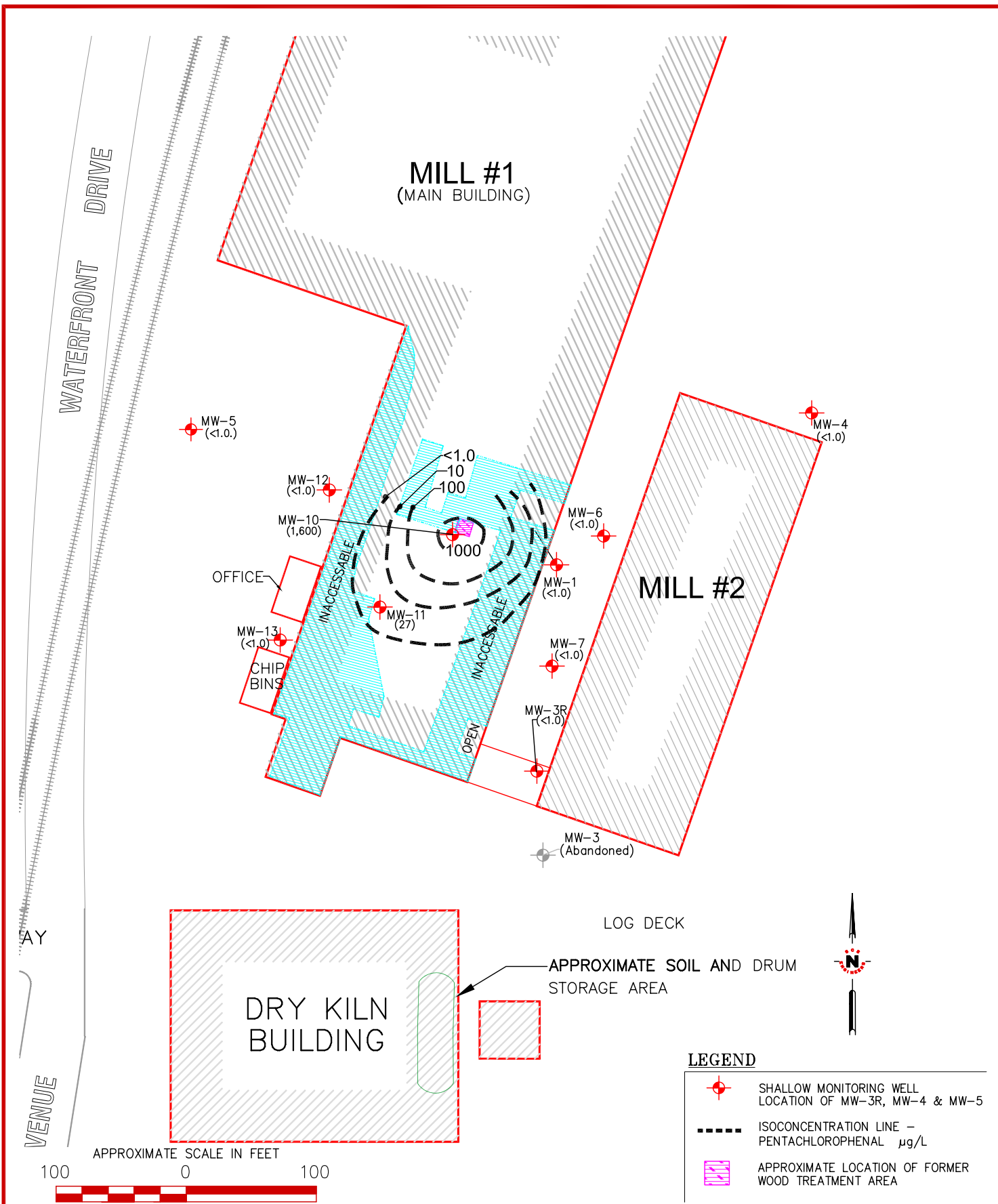
1" = 100' +/-

FIGURE NO.

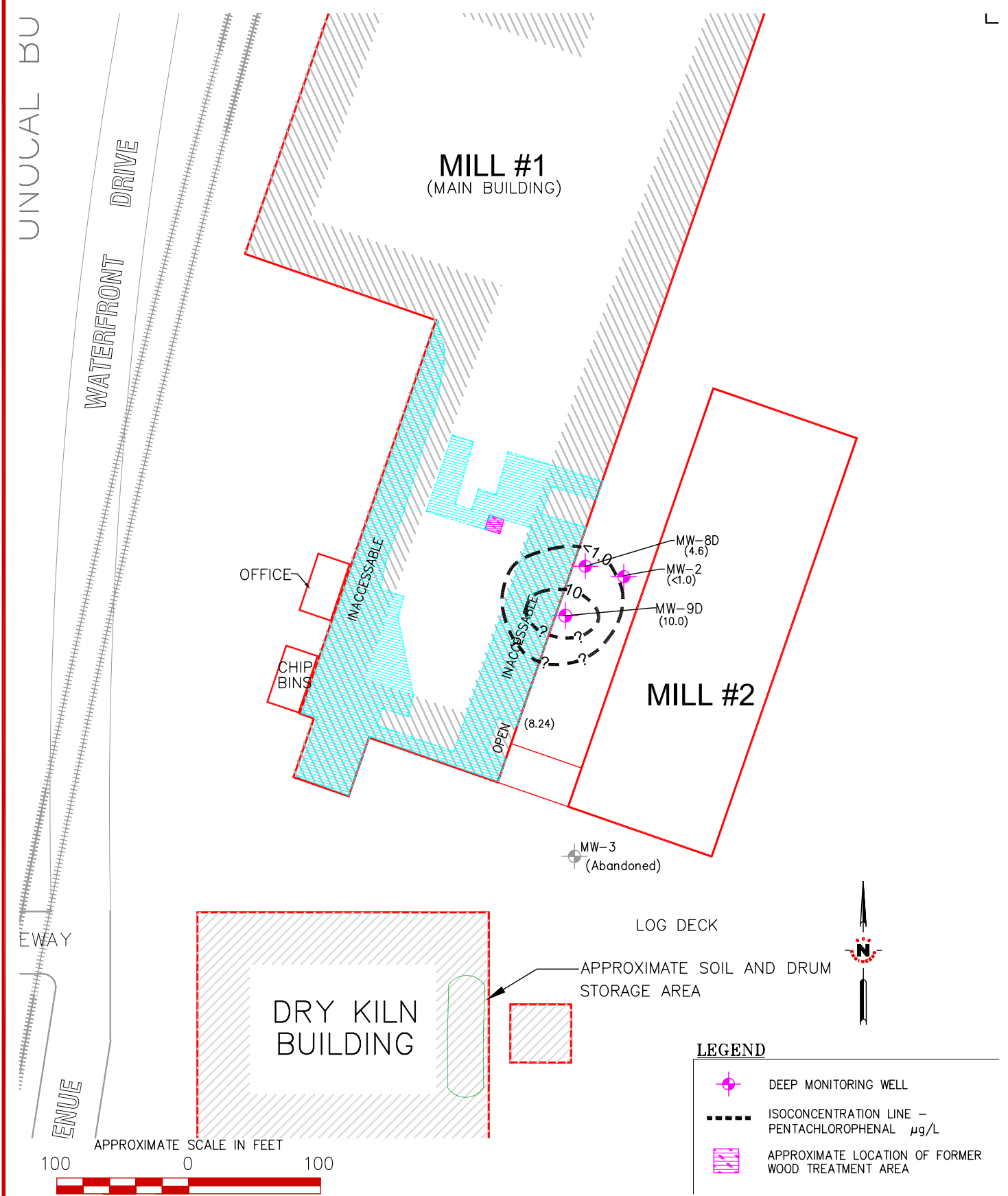
5



<b>SCS ENGINEERS</b> ENVIRONMENTAL CONSULTANTS 3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 94503 PH. (707) 946-5461 FAX. (707) 544-5769			SHEET TITLE: GROUNDWATER FLOW DIRECTION AND GRADIENT: SHALLOW WELLS: 12/5/05	SCALE: 1" = 100' +/-
PROJ. NO. 01203316.00 DATE 2/24/06			PROJECT TITLE: SCHMIDBAUER LUMBER, INC. 1099 WATERFRONT DRIVE EUREKA, CALIFORNIA	FIGURE NO. 6
DWN. BY: JJM CHK. BY: KWF	ACAD FILE: 1203316_GWFLO_2-06 APP. BY: KWF			



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PROJ. NO. 01203316.00 DATE 2/24/06			PROJECT TITLE: SCHMIDBAUER LUMBER, INC. 1099 WATERFRONT DRIVE EUREKA, CALIFORNIA		FIGURE NO. 7
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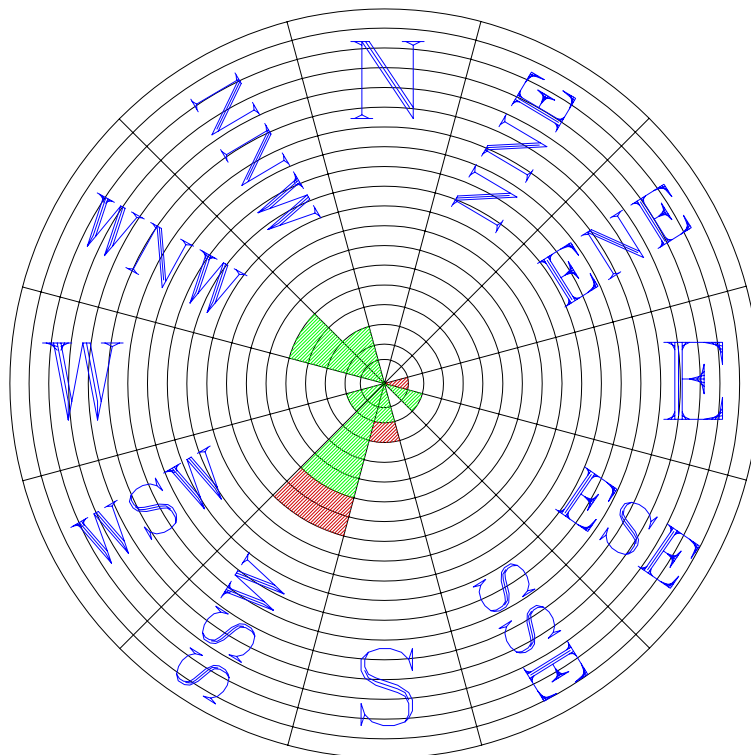


<b>SCS ENGINEERS</b> ENVIRONMENTAL CONSULTANTS 3645 WESTWIND BOULEVARD SANTA ROSA, CALIFORNIA 94503 PH. (707) 946-5461 FAX. (707) 544-5769			SHEET TITLE: PENTACHLOROPHENOL IN GROUNDWATER: DEEP WELLS: 12/05/05	SCALE: 1" = 100' +/-
PROJ. NO. 01203316.00 DATE 2/24/06			PROJECT TITLE: SCHMIDBAUER LUMBER, INC. 1099 WATERFRONT DRIVE EUREKA, CALIFORNIA	FIGURE NO. 8
DWN. BY: JJM	CHK. BY: KWF	ACAD. FILE: 1203316_GWFLO_2-06 APP. BY: KWF		

## Charts

# WINDROSE DIAGRAM

## SHALLOW WELLS: MW-3<sub>1</sub>, MW-3R<sub>1</sub>, MW-4 AND MW-5



### NOTES:

- (1) Well MW-3 abandoned and replaced with well MW-3R.  
Groundwater flows resolved with MW-3R are illustrated in red.

6/00, 9/00, 8/02 events not plotted, well MW-3 inaccessible.

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PROJ. NO.	01203316.00	DWN. BY:	JJM	ACAD FILE:	1203316.00_Windrose
DATE	2/28/06	CHK. BY:	KWF	APP. BY:	KWF

SHEET TITLE:

WINDROSE DIAGRAMS: SHALLOW MONITOR WELLS – 3/99 THROUGH 12/05

PROJECT TITLE:

SCHMIDBAUER LUMBER COMPANY  
1099 WATERFRONT DRIVE  
EUREKA, CALIFORNIA

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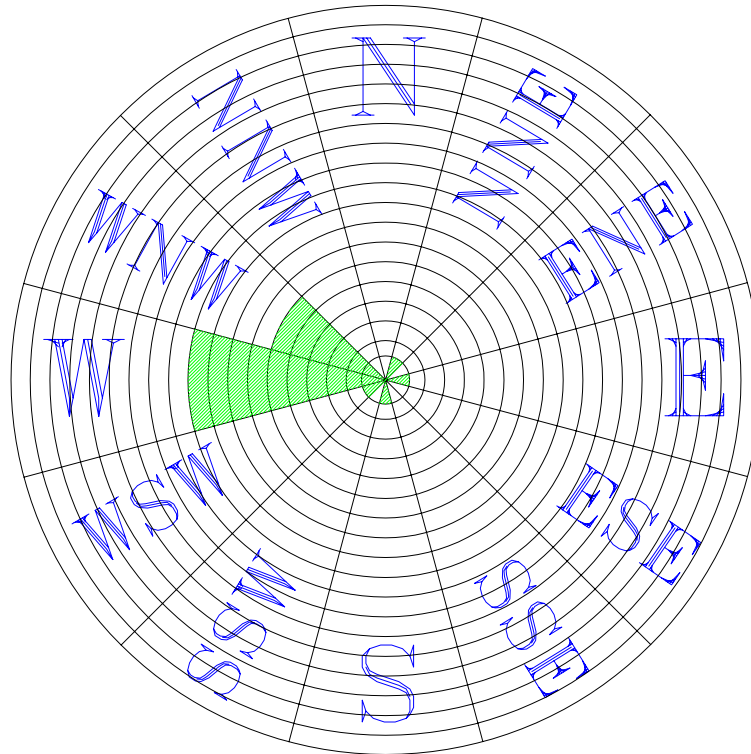
(CHART-No Scale)

CHART:

1

# WINDROSE DIAGRAM

## SHALLOW WELLS: MW-1 , MW-6 AND MW-7



### NOTES:

6/05 event not plotted, well MW-6 inaccessible.

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DATE	2/28/06	CHK. BY:	KWF	APP. BY:	KWF

SHEET TITLE:

WINDROSE DIAGRAM: SHALLOW MONITOR WELLS - 5/01 THROUGH 12/05

PROJECT TITLE:

SCHMIDBAUER LUMBER COMPANY  
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EUREKA, CALIFORNIA

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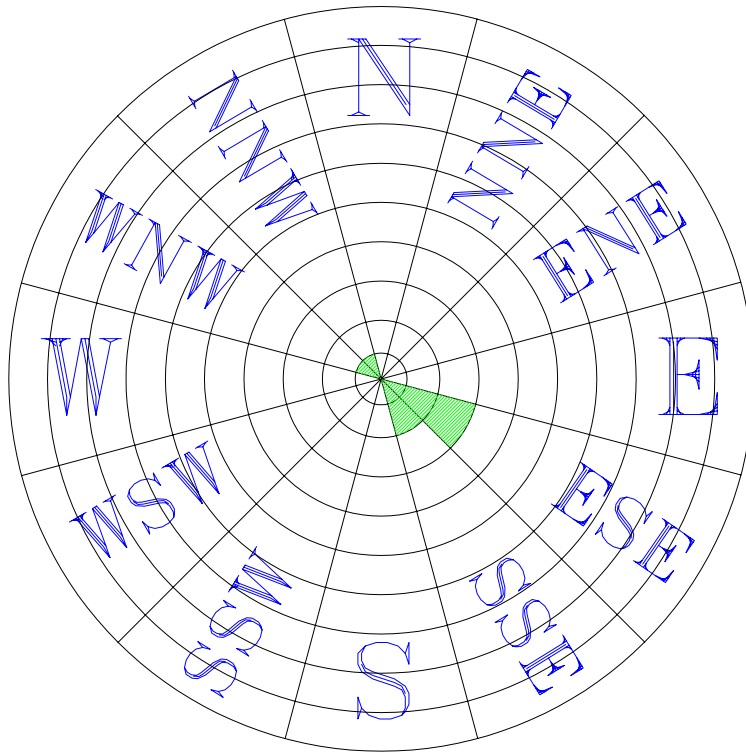
(CHART-No Scale)

CHART:

2

# WINDROSE DIAGRAM

## DEEP WELLS: MW-2, MW-8D AND MW-9D



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DATE	2/28/06	CHK. BY:	KWF	APP. BY:	KWF

SHEET TITLE:

WINDROSE DIAGRAM: DEEP MONITOR WELLS - 3/99 THROUGH 12/05

PROJECT TITLE:

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1099 WATERFRONT DRIVE  
EUREKA, CALIFORNIA

SCALE:

(CHART-No Scale)

CHART:

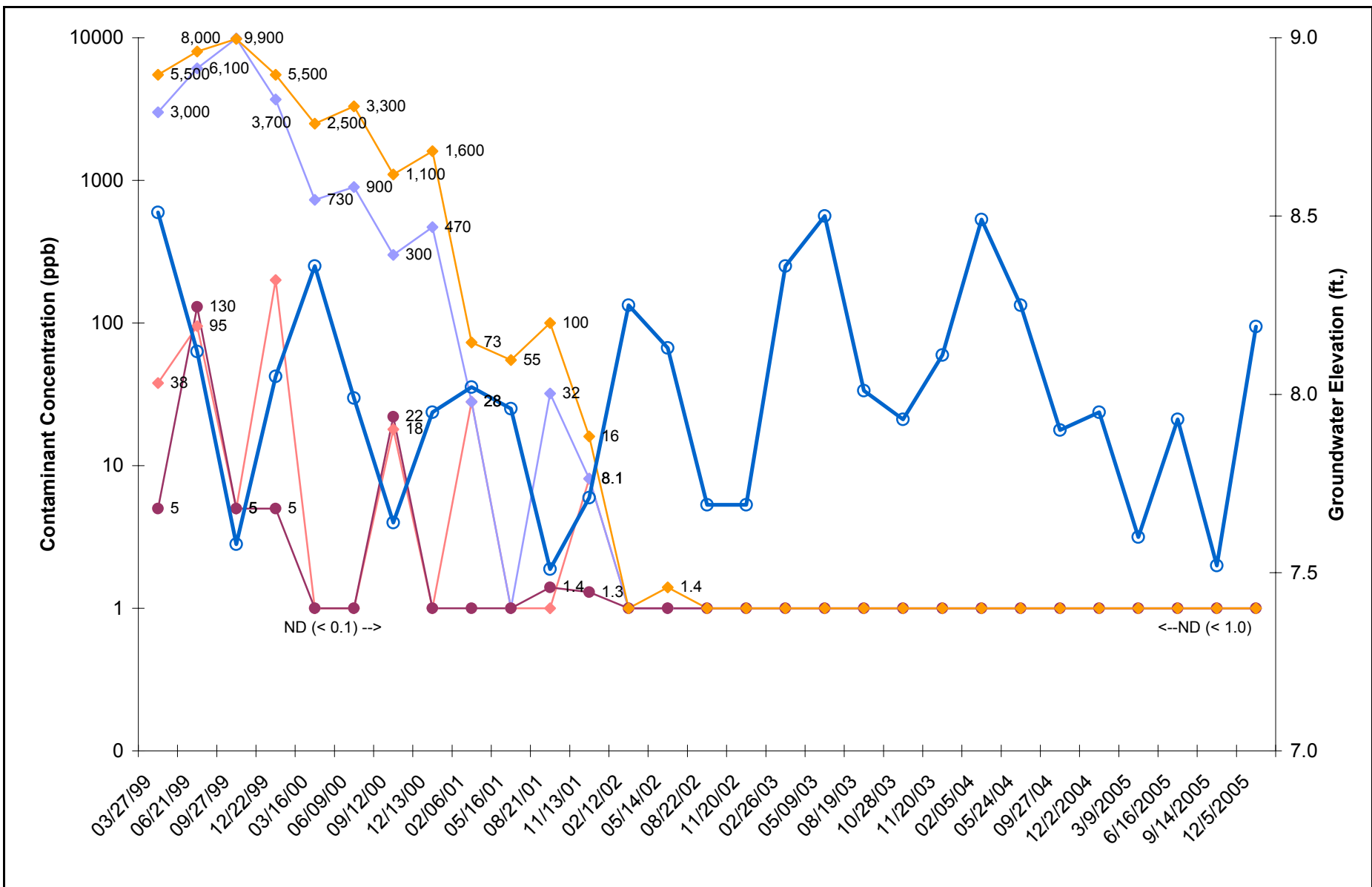
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## **Diagrams and Tables**

**Key and Footnotes to Diagram and Tables  
1099 Waterfront Drive, Eureka, California**

**Key**

PCP	=	Pentachlorophenol
TOC	=	Total organic carbon
mg/kg	=	Milligrams per kilogram
ug/L	=	Micrograms per liter
mg/L	=	Milligrams per liter
ND	=	Not detected
NA	=	Not analyzed
NR	=	Not reported
NS	=	Not sampled



<b>SCS ENGINEERS</b>		<b>Contaminant Concentration and Groundwater Elevation vs. Time - MW-1</b>	<b>DIAGRAM</b>
434 7th Street, Suite B EUREKA, CALIFORNIA PH: (707) 546-9461 FX: (707)544-5769		Schmidbauer Lumber, Inc. 1099 Waterfront Drive Eureka, California	<b>A</b>
Drawn By: MRO	File Name: Diagram-A	Job Number: 01203316.00	DATE: 03/01/06

**Table 1A: Groundwater Flow Direction and Gradient for Shallow Wells: Site Wide  
1099 Waterfront Drive, Eureka, California**

Date	Groundwater Flow Direction ( +/- 5°)	Groundwater Gradient (i=ft / ft)	Notes
03/27/99	S50°E	0.002	
06/21/99	S50°W	0.002	
09/27/99	Generally Southwest		
12/22/99	Generally Southeast		
03/16/00	S45°E	0.002	
06/09/00	Northerly	0.002	MW-3 inaccessible (covered with multiple layers of logs)
09/12/00	N15°W	0.002	MW-2 and MW-3 inaccessible (covered with multiple layers of logs / lumber)
12/13/00	S20°W	0.001	
02/06/01	Southerly	0.002	
05/16/01	Southerly to Easterly	0.002	
08/21/01	Southerly	0.004	
11/13/01	Southerly	0.003	
02/12/02	Southerly	0.001	
05/14/02	Southerly	0.003	
08/22/02	Southerly	0.002	
11/20/02	Southerly	0.002	
02/26/03	Southerly	0.002	
05/09/03	Southerly	0.002	
08/19/03	Southerly	0.003	MW-8D installed
10/28/03	Southerly	0.004	Monitoring wells were re-surveyed to msl on October 7, 2003 MW-3 abandoned and replaced with MW-3R
11/20/03	Southerly	0.002	
02/05/04	S to E	0.001	
05/24/04	Northwesterly	0.003	MW-6 and MW-7 sampled on 6/2/04 (covered by logs on 5/24/04)
09/27/04	Northwesterly	0.002	
12/02/04	West-Northwesterly	0.001	
03/09/05	North-Northwest (N40°W)	0.001	Flow and gradient calculated using MW-3R, MW-4 and MW-5 only.
06/16/05	North-Northwest (N45°W)	0.001	Flow and gradient calculated using MW-3R, MW-4 and MW-5 only.
9/14/2005	West-Northwest (N55°W)	0.001	Flow and gradient calculated using MW-3R, MW-4 and MW-5 only.
12/5/2005	West-Northwest (N45°W)	0.001	Flow and gradient calculated using MW-3R, MW-4 and MW-5 only.

Groundwater flow directions estimated to the nearest 5 degrees.

**Table 1B: Groundwater Flow Direction and Gradient for Shallow Wells: Local (MW-1, MW-6 and MW-7 only)  
1099 Waterfront Drive, Eureka, California**

Date	Groundwater Flow Direction ( +/- 5°)	Groundwater Gradient (i=ft / ft)	Notes
05/16/01	N75°W	0.001	
08/21/01	N30°E	0.001	
11/13/01	N80°W	0.004	
02/12/02	S85°W	0.001	
05/14/02	West (N90°W)	0.001	
08/22/02	S85°W	0.001	
11/20/02	N70°W	0.003	
02/26/03	N70°W	0.002	
05/09/03	N80°W	0.002	
08/19/03	S80°W	0.003	
10/28/03	S75°W	0.003	Monitoring wells were re-surveyed to msl on October 7, 2003
11/20/03	N80°W	0.006	
02/05/04	S80°W	0.001	
05/24/04	West (N90°W)	0.001	
09/27/04	S5°W	0.003	
12/02/04	N75°W	0.002	
03/09/05	N70°W	0.02	
06/16/05	NA <sup>2</sup>	NA <sup>2</sup>	
09/14/05	N75°W	0.003	
12/05/05	N80°W	0.003	

NA<sup>2</sup> - Not available, Well MW-6 in accessible

Groundwater flow directions estimated to the nearest 5 degrees.

**Table 1C: Groundwater Flow Direction and Gradient for Deep Wells (MW-2, MW-8D, MW-9D)  
1099 Waterfront Drive, Eureka, California**

Date	Groundwater Flow Direction ( +/- 5°)	Groundwater Gradient (ft ./ ft.)	Notes
02/05/04	S55°E	0.005	MW-9D installed (surveyed on February 17, 2004)
05/24/04	S50°E	0.003	
09/27/04	NA <sup>3</sup>	NA <sup>3</sup>	
12/02/04	S55°E	0.01	
03/09/05	S65°E	0.01	
06/16/05	N30°W	0.001	
09/14/05	S55°E	0.004	
12/05/05	N65°W	0.03	

NA<sup>3</sup> - Not available, Well MW-2 inaccessible

Groundwater flow directions estimated to the nearest 5 degrees.

**Table 2: Groundwater Analytical Results - MW-1  
1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-1	03/27/99	11.17	2.66	8.51	3.0	38	3,000	<90	5,500
	06/21/99	11.17	3.05	8.12	<10	95	6,100	130	8,000
	09/27/99	11.17	3.59	7.58	9.3	<100	9,900	<100	9,800
	12/22/99	11.17	3.12	8.05	<10	200	3,700	<10	5,500
	03/16/00	11.17	2.81	8.36	<1.0	<1.0	730	<1.0	2,500
	06/09/00	11.17	3.18	7.99	1.0	<1.0	900	<1.0	3,300
	09/12/00	11.17	3.53	7.64	<1.0	18	300	22	1,100
	12/13/00	11.17	3.22	7.95	<1.0	<1.0	470	<1.0	1,600
	02/06/01	11.17	3.15	8.02	15 <sup>1</sup>	28 <sup>2</sup>		<1.0	73
	05/16/01	11.17	3.21	7.96	<1.0	<1.0	<1.0	<1.0	55
	08/21/01	11.17	3.66	7.51	<1.0	<1.0	32	1.4	100
	11/13/01	11.17	3.46	7.71	NR	8.1 <sup>2</sup>		1.3	16
	02/12/02	11.17	2.92	8.25	<1.0	<1.0	<1.0	<1.0	<1.0
	05/14/02	11.17	3.04	8.13	<1.0	<1.0	<1.0	<1.0	1.4
	08/22/02	11.17	3.48	7.69	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/02	11.17	3.48	7.69	<1.0	<1.0	<1.0	<1.0	<1.0
	02/26/03	11.17	2.81	8.36	<1.0	<1.0	<1.0	<1.0	<1.0
	05/09/03	11.17	2.67	8.5	<1.0	<1.0	<1.0	<1.0	<1.0
	08/19/03	11.17	3.16	8.01	<1.0	<1.0	<1.0	<1.0	<1.0
	10/28/03	11.17	3.24	7.93	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/03	11.17	3.06	8.11	<1.0	<1.0	<1.0	<1.0	<1.0
	02/05/04	11.17	2.68	8.49	<1.0	<1.0	<1.0	<1.0	<1.0
	05/24/04	11.17	2.92	8.25	<1.0	<1.0	<1.0	<1.0	<1.0
	09/27/04	11.17	3.27	7.90	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	11.17	3.22	7.95	<1.0	<1.0	<1.0	<1.0	<1.0
	03/09/04	11.17	3.57	7.60	<1.0	<1.0	<1.0	<1.0	<1.0
	06/16/05	11.17	3.11	8.06	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	11.17	3.65	7.52	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	11.17	2.98	8.19	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

1 - Analytical method yields total trichlorophenols as conducted by Analytical Science:

2 - Co-elution

NR - Not Reported

**Table 3: Groundwater Analytical Results - MW-2**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-2	03/27/99	10.53	6.05	4.48	<0.1	<b>0.88</b>	<b>16</b>	<0.1	<b>35</b>
	06/21/99	10.53	6.64	3.89	<0.1	<b>0.97</b>	<b>24</b>	<b>0.66</b>	<b>62</b>
	09/27/99	10.53	7.61	2.92	<1.0	<1.0	<1.0	<1.0	<1.0
	12/22/99	10.53	5.89	4.64	<1.0	<1.0	<b>3.8</b>	<1.0	<b>16</b>
	03/16/00	10.53	6.05	4.48	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/00	10.53	7.49	3.04	<1.0	<1.0	<1.0	<1.0	<1.0
	09/12/00	10.53	Inaccessible, covered by multiple layers of logs/lumber						
	12/13/00	10.53	6.36	4.17	<1.0	<1.0	<1.0	<1.0	<1.0
	02/06/01	10.53	6.25	4.28	<1.0 <sup>1</sup>	<1.0 <sup>2</sup>		<1.0	<1.0
	05/16/01	10.53	6.60	3.93	<1.0	<1.0	<1.0	<1.0	<1.0
	8/21/01 <sup>3</sup>	10.53	7.52	3.01	<1.0	<1.0	<1.0	<1.0	<1.0
	11/13/01	10.53	6.01	4.52	NA	NA	NA	<1.0	<1.0
	02/12/02	10.53	6.12	4.41	NA	NA	NA	NA	NA
	05/14/02	10.53	7.53	3.00	<1.0	<1.0	<1.0	<1.0	<1.0
	08/22/02	10.53	Inaccessible, covered by multiple layers of logs/lumber						
	11/20/02	10.53	6.13	4.40	<1.0	<1.0	<1.0	<1.0	<1.0
	02/26/03	10.53	5.30	5.23	NA	NA	NA	NA	NA
	05/09/03	10.53	6.07	4.46	<1.0	<1.0	<1.0	<1.0	<1.0
	08/19/03	10.53	6.53	4.00	NA	NA	NA	NA	NA
	10/28/03	10.53	5.70	4.83	NA	NA	NA	NA	NA
	11/20/03	10.53	6.12	4.41	<1.0	<1.0	<1.0	<1.0	<1.0
	02/05/04	10.53	5.49	5.04	NA	NA	NA	NA	NA
	05/24/04	10.53	7.12	3.41	<1.0	<1.0	<1.0	<1.0	<1.0
	09/27/04	10.53	Not sampled <sup>7</sup>						
	12/02/04	10.53	5.94	4.59	<1.0	<1.0	<1.0	<1.0	<1.0
	03/09/05	10.53	6.20	4.33	<1.0	<1.0	<1.0	<1.0	<1.0
	06/16/05	10.53	6.65	3.88	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	10.53	6.58	3.95	NS	NS	NS	NS	NS
	12/05/05	10.53	5.74	4.79	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

1 - Analytical method yields total trichlorophenols as conducted by Analytical Sciences

2 - Co-elution

7 - Well inaccessible.

NA - Not Analyzed

NR - Not Reported

NS - Not Sampled

**Table 4: Groundwater Analytical Results - MW-3**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-3	03/27/99	7.82	<0.1	<0.1	<0.1	<0.1	<0.1
	06/21/99	3.50	<0.1	<0.1	<0.1	<0.1	<b>0.31</b>
	09/27/99	6.65	<1.0	<1.0	<b>16</b>	<1.0	<b>0.31</b>
	12/22/99	7.50	<1.0	<1.0	<1.0	<1.0	<1.0
	03/16/00	7.85	<1.0	<1.0	<1.0	<1.0	<1.0
	06/08/00	Inaccessible; Well covered by multiple layers of logs/lumber					
	09/12/00	Inaccessible; Well covered by multiple layers of logs/lumber					
	12/13/00	7.65	<1.0	<1.0	<1.0	<1.0	<1.0
	02/06/01	7.48	<1.0	<1.0 <sup>2</sup>		<1.0	<1.0
	5/16/01 <sup>4</sup>	7.43	NA	NA	NA	NA	NA
	08/21/01	6.88	<1.0	<1.0	<1.0	<1.0	<1.0
	11/13/01	7.01	NA	NA	NA	NA	NA
	02/12/02	7.55	NA	NA	NA	NA	NA
	05/14/02	7.38	NA	NA	NA	NA	NA
	08/22/02	Inaccessible; Well covered by multiple layers of logs/lumber					
	11/20/02	7.18	NA	NA	NA	NA	NA
	02/26/03	7.82	NA	NA	NA	NA	NA
	05/09/03	7.96	NA	NA	NA	NA	NA
	08/19/03	7.14	<1.0	<1.0	<1.0	<1.0	<1.0
	10/28/03	Well Abandoned September 2003 and replaced by MW-3R					

**Footnotes**

2 - Co-elution

4 - Well converted to annual sampling program per 3/15/01 NCRWQCB letter

NA - Not Analyzed

**Table 5: Groundwater Analytical Results - MW-3R**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-3R	10/28/03 <sup>4</sup>	10.49	3.22	7.27	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/03	10.49	2.83	7.66	NA	NA	NA	NA	NA
	02/05/04	10.49	2.24	8.25	NA	NA	NA	NA	NA
	05/24/04	10.49	2.46	8.03	NA	NA	NA	NA	NA
	09/27/04	10.49	2.84	7.65	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	10.49	2.69	7.80	NA	NA	NA	NA	NA
	03/09/05	10.49	2.50	7.99	NA	NA	NA	NA	NA
	06/16/05	10.49	2.50	7.99	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	10.49	3.04	7.45	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	10.49	2.41	8.08	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

4 - Well converted to annual sampling program per 3/15/01 NCRWQCB letter

NA - Not Analyzed

**Table 6: Groundwater Analytical Results - MW-4**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-4	03/27/99	10.06	2.14	7.92	<0.1	<0.1	<b>0.12</b>	<0.1	<b>0.3</b>
	06/21/99	10.06	2.28	7.78	<0.1	<b>0.21</b>	<b>1.2</b>	<0.1	<b>3.0</b>
	09/27/99	10.06	2.53	7.53	<1.0	<1.0	<1.0	<1.0	<1.0
	12/22/99	10.06	2.29	7.77	<1.0	<1.0	<1.0	<1.0	<1.0
	03/16/00	10.06	2.01	8.05	<1.0	<1.0	<1.0	<1.0	<1.0
	06/09/00	10.06	2.28	7.78	<1.0	<1.0	<1.0	<1.0	<1.0
	09/12/00	10.06	2.45	7.61	<1.0	<1.0	<1.0	<1.0	<b>1.8</b>
	12/13/00	10.06	2.10	7.96	NA	NA	NA	NA	NA
	02/06/01	10.06	2.09	7.97	<1.0 <sup>1</sup>	<1.0 <sup>2</sup>		<1.0	<1.0
	5/16/01 <sup>4</sup>	10.06	2.70	7.36	NA	NA	NA	NA	NA
	08/21/01	10.06	2.51	7.55	<1.0	<1.0	<1.0	<1.0	<1.0
	11/13/01	10.06	2.09	7.97	NA	NA	NA	NA	NA
	02/12/02	10.06	1.87	8.19	NA	NA	NA	NA	NA
	05/14/02	10.06	2.15	7.91	NA	NA	NA	NA	NA
	08/22/02	10.06	2.00	8.06	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/02	10.06	2.36	7.70	NA	NA	NA	NA	NA
	02/26/03	10.06	1.99	8.07	NA	NA	NA	NA	NA
	05/09/03	10.06	1.86	8.20	NA	NA	NA	NA	NA
	08/19/03	10.06	2.15	7.91	<1.0	<1.0	<1.0	<1.0	<1.0
	10/28/03	10.06	2.00	8.06	NA	NA	NA	NA	NA
	11/20/03	10.06	1.92	8.14	NA	NA	NA	NA	NA
	02/05/04	10.06	1.91	8.15	NA	NA	NA	NA	NA
	05/24/04	10.06	2.03	8.03	NA	NA	NA	NA	NA
	09/27/04	10.06	2.27	7.79	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	10.06	2.27	7.79	NA	NA	NA	NA	NA
	03/09/05	10.06	2.13	7.93	NA	NA	NA	NA	NA
	06/16/05	10.06	2.11	7.95	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	10.06	2.59	7.47	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	10.06	2.03	8.03	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

2 - Co-elution

4 - Well converted to annual sampling program per 3/15/01 NCRWQCB letter

NA - Not Analyzed

**Table 7: Groundwater Analytical Results - MW-5**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-5	03/27/99	10.03	1.43	8.60	<0.1	<0.1	<0.1	<0.1	<b>0.14</b>
	06/21/99	10.03	2.81	7.22	<0.1	<0.1	<b>0.38</b>	<0.1	<b>1</b>
	09/27/99	10.03	3.19	6.84	<1.0	<1.0	<1.0	<1.0	<1.0
	12/22/99	10.03	2.30	7.73	<1.0	<1.0	<1.0	<1.0	<1.0
	03/16/00	10.03	1.15	8.88	<1.0	<1.0	<1.0	<1.0	<1.0
	06/09/00	10.03	2.31	7.72	<1.0	<1.0	<1.0	<1.0	<1.0
	09/12/00	10.03	3.18	6.85	<1.0	<1.0	<1.0	<1.0	<1.0
	12/13/00	10.03	2.24	7.79	<1.0	<1.0	<1.0	<1.0	<1.0
	02/06/01	10.03	2.33	7.70	<1.0 <sup>1</sup>	<1.0 <sup>2</sup>		<1.0	<1.0
	5/16/01 <sup>4</sup>	10.03	2.33	7.70	NA	NA	NA	NA	NA
	08/21/01	10.03	3.24	6.79	<1.0	<1.0	<1.0	<1.0	<1.0
	11/13/01	10.03	1.90	8.13	NA	NA	NA	NA	NA
	02/12/02	10.03	2.14	7.89	NA	NA	NA	NA	NA
	05/14/02	10.03	2.65	7.38	NA	NA	NA	NA	NA
	08/22/02	10.03	3.10	6.93	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/02	10.03	2.74	7.29	NA	NA	NA	NA	NA
	02/26/03	10.03	2.09	7.94	NA	NA	NA	NA	NA
	05/09/03	10.03	1.77	8.26	NA	NA	NA	NA	NA
	08/19/03	10.03	2.66	7.37	<1.0	<1.0	<1.0	<1.0	<1.0
	10/28/03	10.03	2.54	7.49	NA	NA	NA	NA	NA
	11/20/03	10.03	1.92	8.11	NA	NA	NA	NA	NA
	02/05/04	10.03	1.65	8.38	NA	NA	NA	NA	NA
	05/24/04	10.03	2.43	7.60	NA	NA	NA	NA	NA
	09/27/04	10.03	2.74	7.29	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	10.03	2.38	7.65	NA	NA	NA	NA	NA
	03/09/05	10.03	2.35	7.68	NA	NA	NA	NA	NA
	06/16/05	10.03	2.50	7.53	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	10.03	3.08	6.95	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	10.03	2.49	7.54	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

1 - Analytical method yields total trichlorophenols as conducted by Analytical Sciences

2 - Co-elution

4 - Well converted to annual sampling program per 3/15/01 NCRWQCB letter

NA - Not Analyzed

**Table 8: Groundwater Analytical Results - MW-6**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-6	02/06/01	10.71	2.75	7.96	4.5	<1.0 <sup>2</sup>		<1.0	<1.0
	05/16/01	10.71	2.71	8.00	<1.0	<1.0	<1.0	<1.0	6.1
	08/21/01	10.71	3.24	7.47	<1.0	<1.0	<1.0	<1.0	<1.0
	11/13/01	10.71	2.87	7.84	NR	<1.0 <sup>2</sup>		<1.0	<1.0
	02/12/02	10.71	2.41	8.30	<1.0	<1.0	<1.0	<1.0	<1.0
	05/14/02	10.71	2.51	8.20	<1.0	<1.0	<1.0	<1.0	<1.0
	08/22/02	10.71	2.98	7.73	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/02	10.71	2.96	7.75	<1.0	<1.0	<1.0	<1.0	<1.0
	02/26/03	10.71	2.31	8.40	<1.0	<1.0	<1.0	<1.0	<1.0
	05/09/03	10.71	2.16	8.55	<1.0	<1.0	<1.0	<1.0	<1.0
	08/19/03	10.71	2.59	8.12	<1.0	<1.0	<1.0	<1.0	<1.0
	10/28/03	10.71	2.67	8.04	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/03	10.71	2.49	8.22	<1.0	<1.0	<1.0	<1.0	<1.0
	02/05/04	10.71	2.18	8.53	<1.0	<1.0	<1.0	<1.0	<1.0
	06/02/04 <sup>6</sup>	10.71	2.38	8.33	<1.0	<1.0	<1.0	<1.0	<1.0
	09/27/04	10.71	2.74	7.97	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	10.71	2.70	8.01	<1.0	<1.0	<1.0	<1.0	<1.0
	03/09/05	10.71	2.56	8.15	<1.0	<1.0	<1.0	<1.0	<1.0
	06/16/05	10.71	NM	NM	NA	NA	NA	NA	NA
	09/14/05	10.71	3.11	7.60	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	10.71	2.42	8.29	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

2 - Co-elution

6 - Wells inaccessible 5/27/04. Depth to water measured 6/2/04

NA - Not Analyzed

NM - Not Measured

**Table 9: Groundwater Analytical Results - MW-7**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-7	02/06/01	10.76	2.79	7.97	<1.0	<1.0 <sup>2</sup>		<1.0	<1.0 <sup>5</sup>
	05/16/01	10.76	2.78	7.98	<1.0	<1.0	<1.0	<1.0	<1.0
	08/21/01	10.76	3.19	7.57	<1.0	<1.0	<1.0	<1.0	<1.0
	11/13/01	10.76	3.10	7.66	NR	<1.0 <sup>2</sup>		<1.0	<1.0
	02/12/02	10.76	2.52	8.24	<1.0	<1.0	<1.0	<1.0	<1.0
	05/14/02	10.76	2.63	8.13	<1.0	<1.0	<1.0	<1.0	<1.0
	08/22/02	10.76	3.06	7.70	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/02	10.76	3.03	7.73	<1.0	<1.0	<1.0	<1.0	<1.0
	02/26/03	10.76	2.37	8.39	<1.0	<1.0	<1.0	<1.0	<1.0
	05/09/03	10.76	2.24	8.52	<1.0	<1.0	<1.0	<1.0	<1.0
	08/19/03	10.76	2.79	7.97	<1.0	<1.0	<1.0	<1.0	<1.0
	10/28/03	10.76	2.89	7.87	<1.0	<1.0	<1.0	<1.0	<1.0
	11/20/03	10.76	2.69	8.07	<1.0	<1.0	<1.0	<1.0	<1.0
	02/05/04	10.76	2.29	8.47	<1.0	<1.0	<1.0	<1.0	<1.0
	06/02/04 <sup>6</sup>	10.76	2.50	8.26	<1.0	<1.0	<1.0	<1.0	<1.0
	09/27/04	10.76	2.86	7.90	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	10.76	2.79	7.97	<1.0	<1.0	<1.0	<1.0	<1.0
	03/09/05	10.76	2.62	8.14	<1.0	<1.0	<1.0	<1.0	<1.0
	06/16/05	10.76	2.64	8.12	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	10.76	3.19	7.57	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	10.76	2.52	8.24	<1.0	<1.0	<1.0	<1.0	<1.0

**Footnotes**

2 - Co-elution

5 - Laboratory reports presence of pentachlorophenol below normal laboratory reporting limits

6 - Wells inaccessible 5/27/04. Depth to water measured 6/2/04

NR - Not Reported

**Table 10: Groundwater Analytical Results - MW-8D**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,5-Trichlorophenol (µg/L)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-8D	10/28/03	11.15	6.13	5.02	NA	<1.0	<1.5 <sup>2</sup>		<1.0	6.6
	11/20/03	11.15	6.57	4.58	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	02/05/04	11.15	5.96	5.19	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	05/24/04	11.15	7.63	3.52	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	09/27/04	11.15	6.88	4.27	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	11.15	6.42	4.73	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	03/09/05	11.15	6.72	4.43	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/16/05	11.15	7.25	3.90	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	11.15	7.08	4.07	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	11.15	7.30	3.85	1.0	<1.0	<1.0	<1.0	<1.0	4.6

**Table 11: Groundwater Analytical Results - MW-9D**  
**1099 Waterfront Drive, Eureka, California**

Well ID	Sample Date	Top of Casing Elevation (ft>msl)	Depth to Groundwater (feet)	Water Level Elevation (feet > msl)	2,4,5-Trichlorophenol (µg/L)	2,4,6-Trichlorophenol (µg/L)	2,3,5,6-Tetrachlorophenol (µg/L)	2,3,4,6-Tetrachlorophenol (µg/L)	2,3,4,5-Tetrachlorophenol (µg/L)	Pentachlorophenol (µg/L)
MW-9D	02/05/04	11.01	5.86	5.15	NA	<1.0	<1.0	1.9	<1.0	12
	05/24/04	11.01	7.53	3.48	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	09/27/04	11.01	6.78	4.23	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	12/02/04	11.01	6.32	4.69	NA	<1.0	<1.0	<1.0	<1.0	<1.0
	03/09/05	11.01	6.75	4.26	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/16/05	11.01	7.09	3.92	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/14/05	11.01	6.98	4.03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/05/05	11.01	7.01	4.00	1.5	<1.0	<1.0	1.8	<1.0	10

**Footnotes**

2 - Co-elution

NA - Not Analyzed

NR - Not Reported



**Table 16: Groundwater Analytical Results - Trihalomethanes: June 2005**  
**1099 Waterfront Drive, Eureka, California**

Sample Date	Well ID	Chloroform	Dibromodichloromethane	Dibromochloromethane	Bromoform
06/16/05	MW-1	<1.0	<1.0	<1.0	<1.0
	MW-2	<1.0	<1.0	<1.0	<1.0
	MW-3R	<1.0	<1.0	<1.0	<1.0
	MW-4	<1.0	<1.0	<1.0	<1.0
	MW-5	<1.0	<1.0	<1.0	<1.0
	MW-6	NA	NA	NA	NA
	MW-7	<1.0	<1.0	<1.0	<1.0
	MW-8D	<1.0	<1.0	<1.0	<1.0
	MW-9D	<1.0	<1.0	<1.0	<1.0

**Footnotes**

NA - Not Analyzed

**Table 17: Groundwater Analytical Results - Dioxins and Furans  
1099 Waterfront Drive, Eureka California**

Well ID Number	Sample Date	Acronym	Analyte Name	Toxic Equivalency Factor (1998)	Detection (pg/L)	Toxic Equivancy Quotient
MW-10	12/09/05	2,3,7,8-TCDD	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1	0.00	0.0000
		1,2,3,7,8-PeCDD	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	23.2 <sup>8</sup>	23.2000
		1,2,3,4,7,8-HxCDD	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	1850	185.0000
		1,2,3,6,7,8-HxCDD	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	20900	2090.0000
		1,2,3,7,8,9-HxCDD	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	4970	497.0000
		1,2,3,4,6,7,8-HpCDD	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	279000	2790.0000
		OCDD	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	0.0001	88000	8.8000
		2,3,7,8-TCDF	2,3,7,8-Tetrachlorodibenzofuran	0.1	0.00	0.0000
		1,2,3,7,8-PeCDF	1,2,3,7,8-Pentachlorodibenzofuran	0.05	15.70 <sup>8</sup>	0.7850
		2,3,4,7,8-PeCDF	2,3,4,7,8-Pentachlorodibenzofuran	0.5	5.66 <sup>8</sup>	2.8300
		1,2,3,4,7,8-HxCDF	1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	16.90 <sup>8</sup>	1.6900
		1,2,3,6,7,8-HxCDF	1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	17.60 <sup>8</sup>	1.7600
		2,3,4,6,7,8-HxCDF	2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	29.40 <sup>8</sup>	2.9400
		1,2,3,7,8,9-HxCDF	1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	89.00	8.9000
		1,2,3,4,6,7,8-HpCDF	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	2410.00	24.1000
		1,2,3,4,7,8,9-HpCDF	1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	54.20	0.5420
		OCDF	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	0.0001	7300.00	0.7300
		Total TEQ				5638.2770

**Footnotes**

8 - Laboratory reported analyte concentration is below calibration range

## **Appendices**

**Appendix A**  
**Well Purge Records 4<sup>th</sup> Quarter**



























## **Appendix B**

### **Laboratory Analytical Reports**

**Analytical Science Report #5120801, dated 19 December 2005**

**Frontier Analytical Laboratory Report #3646, dated 28 December 2005**

**Analytical Science Report #5121202, dated 12 January 2006**



December 19, 2005

Karin Fresnel  
SCS Engineers  
3645 Westwind Blvd  
Santa Rosa, CA 95403

Dear Karin,

Enclosed you will find Analytical Sciences' final report 5120801 for your Schmidbauer project. An invoice for this work is enclosed.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

Sincerely,

Analytical Sciences

Mark A. Valentini, Ph.D.

Laboratory Director



Report Date: December 19, 2005

## **Laboratory Report**

Karin Fresnel  
SCS Engineers  
3645 Westwind Blvd  
Santa Rosa, CA 95403

Project Name:      **Schmidbauer**                              **01203316.00**  
Lab Project:        **5120801**

This 10 page report of analytical data has been reviewed and approved for release.

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Mark A. Valentini, Ph.D.

Laboratory Director



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-01	MW-1	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		24.8	93	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		

### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-02	MW-2	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		27.3	102	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-03	MW-3R	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		24.0	90	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		

### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-04	MW-4	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		24.9	93	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-05	MW-5	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		23.0	86	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		

### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-06	MW-6	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		25.1	94	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-07	MW-7	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		23.5	88	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/20/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		

### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-08	MW-8D	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	1.0	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	4.6	1.0
Surrogates	Result (ug/L)	% Recovery	Acceptance Range (%)	
2,4,6-Tribromophenol	22.0	82	30-150	

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-09	MW-9D	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	1.5	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	1.8	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	10	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		28.7	107	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch: B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method	

### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-11	MW-11	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	2.7	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		24.1	90	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch: B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method	



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-12	MW-12	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		24.5	92	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		

### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5120801-13	MW-13	2,4,6-Trichlorophenol	ND	1.0
		2,4,5-Trichlorophenol	ND	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	ND	1.0
		2,3,4,5-Tetrachlorophenol	ND	1.0
		Pentachlorophenol	ND	1.0
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		23.1	87	30-150

Date Sampled:	12/05/05	Date Analyzed:	12/10/05	QC Batch:	B000392
Date Received:	12/07/05	Method:	Canadian Pulp Method		



## Quality Assurance Report

### Chlorinated Phenols by Canadian Pulp Method in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B000392 - EPA 3510C\_MS

##### Blank (B000392-BLK1)

Prepared & Analyzed: 12/09/05

2,4,6-Trichlorophenol	ND	1.0	ug/L
2,4,5-Trichlorophenol	ND	1.0	ug/L
2,3,4-Trichlorophenol	ND	1.0	ug/L
2,3,5,6-Tetrachlorophenol	ND	1.0	ug/L
2,3,4,6-Tetrachlorophenol	ND	1.0	ug/L
2,3,4,5-Tetrachlorophenol	ND	1.0	ug/L
Pentachlorophenol	ND	1.0	ug/L

Surrogate: 2,4,6-Tribromophenol 29.0 ug/L 26.7 109 30-150

##### Blank (B000392-BLK2)

Prepared & Analyzed: 12/12/05

2,4,6-Trichlorophenol	ND	1.0	ug/L
2,4,5-Trichlorophenol	ND	1.0	ug/L
2,3,4-Trichlorophenol	ND	1.0	ug/L
2,3,5,6-Tetrachlorophenol	ND	1.0	ug/L
2,3,4,6-Tetrachlorophenol	ND	1.0	ug/L
2,3,4,5-Tetrachlorophenol	ND	1.0	ug/L
Pentachlorophenol	ND	1.0	ug/L

Surrogate: 2,4,6-Tribromophenol 14.8 ug/L 26.7 55 30-150

##### LCS (B000392-BS1)

Prepared & Analyzed: 12/09/05

2,3,5,6-Tetrachlorophenol	5.20	1.0	ug/L	5.00	104	30-130
2,3,4,6-Tetrachlorophenol	5.40	1.0	ug/L	5.00	108	30-130
2,3,4,5-Tetrachlorophenol	5.33	1.0	ug/L	5.00	107	30-130
Pentachlorophenol	5.33	1.0	ug/L	5.00	107	30-130

Surrogate: 2,4,6-Tribromophenol 23.6 ug/L 26.7 88 30-130

##### LCS Dup (B000392-BSD1)

Prepared & Analyzed: 12/09/05

2,3,5,6-Tetrachlorophenol	5.13	1.0	ug/L	5.00	103	30-130	1	20
2,3,4,6-Tetrachlorophenol	5.27	1.0	ug/L	5.00	105	30-130	3	20
2,3,4,5-Tetrachlorophenol	5.20	1.0	ug/L	5.00	104	30-130	3	20
Pentachlorophenol	5.20	1.0	ug/L	5.00	104	30-130	3	20

Surrogate: 2,4,6-Tribromophenol 28.3 ug/L 26.7 106 30-130



## Chlorinated Phenols by Canadian Pulp Method in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B000392 - EPA 3510C_MS</b>										
<b>Matrix Spike (B000392-MS1)</b>		<b>Source: 5120801-01</b>		<b>Prepared &amp; Analyzed: 12/09/05</b>						
2,3,5,6-Tetrachlorophenol	5.20	1.0	ug/L	5.00	ND	104	0-200			
2,3,4,6-Tetrachlorophenol	5.47	1.0	ug/L	5.00	ND	109	0-200			
2,3,4,5-Tetrachlorophenol	5.33	1.0	ug/L	5.00	ND	107	0-200			
Pentachlorophenol	5.67	1.0	ug/L	5.00	ND	113	0-200			
<i>Surrogate: 2,4,6-Tribromophenol</i>										
	29.7		ug/L	26.7		111	30-150			
<b>Matrix Spike Dup (B000392-MSD1)</b>		<b>Source: 5120801-01</b>		<b>Prepared &amp; Analyzed: 12/09/05</b>						
2,3,5,6-Tetrachlorophenol	5.27	1.0	ug/L	5.00	ND	105	0-200	1	200	
2,3,4,6-Tetrachlorophenol	5.60	1.0	ug/L	5.00	ND	112	0-200	3	200	
2,3,4,5-Tetrachlorophenol	5.47	1.0	ug/L	5.00	ND	109	0-200	2	200	
Pentachlorophenol	5.80	1.0	ug/L	5.00	ND	116	0-200	3	200	
<i>Surrogate: 2,4,6-Tribromophenol</i>										
	26.0		ug/L	26.7		97	30-150			



## Notes and Definitions

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ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference



Analytical Sciences  
P.O. Box 750336, Petaluma, CA 94975-0336  
110 Liberty Street, Petaluma, CA 94952  
(707) 769-3128  
Fax (707) 769-8093

# CHAIN OF CUSTODY

LAB PROJECT NUMBER: 5120801

CLIENT'S PROJECT NAME: Schmidbauer Lumber Co.

CLIENT'S PROJECT NUMBER: 01203316.00

## BILLING INFORMATION

CONTACT: RICH GRAHAM  
COMPANY NAME: SCHMIDBAUER LUMBER CO.  
ADDRESS: 1099 WATERFRONT DR.  
EUREKA, CA  
PHONE#: \_\_\_\_\_  
FAX #: \_\_\_\_\_

## CLIENT INFORMATION

COMPANY NAME: SCS ENGINEERS  
ADDRESS: 3645 WESTWIND BOULEVARD  
SANTA ROSA, CA 95403  
CONTACT: KARIN FRESNEL  
PHONE#: (707) 546-9461  
FAX #: (707) 544-5769

## TURNAROUND TIME (check one)

MOBILE LAB

SAME DAY

48 HOURS

5 DAYS

24 HOURS

NORMAL X

GEOTRACKER EDF: Y Y

GLOBAL ID: \_\_\_\_\_

COOLER TEMPERATURE

°C

COC

PAGE 1 OF 2

## ANALYSIS

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	PCPT/CP BY CANDIAN PULP	LAB SAMPLE #
1	MW-1	12/5/05	9:15	LIR	2	N	X	1F PCP is 312.88-1
2	MW-2	5:40					X	detected Thru 2
3	MW-3R	9:45					X	Analysis for
4	MW-4	10:30					X	dioxins &
5	MW-5	3:20					X	Furans
6	MW-6	6:20					X	
7	MW-7	4:50					X	
8	MW-8D	8:50					X	
9	MW-9D	8:20					X	
10	MW-10	7:40					X	sample (low)
11	MW-11	7:00					X	

## SIGNATURES

SAMPLED BY:

*Bruce Tave*

RELINQUISHED BY:

RECEIVED BY LABORATORY:

12.07.05 15:55

*[Signature]*

12/7/05

SIGNATURE

DATE

TIME

SIGNATURE

DATE

TIME

**Analytical Sciences**  
P.O. Box 750336, Petaluma, CA 94975-0336  
110 Liberty Street, Petaluma, CA 94952  
(707) 769-3128  
Fax (707) 769-8093

# CHAIN OF CUSTODY

LAB PROJECT NUMBER: 5126301

**CLIENT'S PROJECT NAME:** Schmidbauer Lumber Co.

**CLIENT'S PROJECT NUMBER: 01203316.00**

CLIENT INFORMATION		BILLING INFORMATION	
COMPANY NAME:	SCS ENGINEERS	CONTACT:	RICH GRAHAM
ADDRESS:	3645 WESTWIND BOULEVARD	COMPANY NAME:	SCHMIDBAUER LUMBER CO.
	SANTA ROSA, CA 95403	ADDRESS:	1099 WATERFRONT DR.
CONTACT:	KARIN FRESNEL		EUREKA, CA
PHONE#:	(707) 546-9461	PHONE#:	
FAX #:	(707) 544-5769	FAX #:	

<b>TURNAROUND TIME (check one)</b>		GEOTracker EDF: ____ Y ____ N	
MOBILE LAB	_____	GLOBAL ID: _____	
SAME DAY	_____	COOLER TEMPERATURE	
48 HOURS	_____	°C _____	
5 DAYS	_____	COC _____	

PAGE 2 OF 2

[illegible]

## SIGNATURES

**SAMPLED BY:**

**RELINQUISHED BY:**

RECEIVED BY LABORATORY:

12.07.05 15:55

12/17/05 1055

**SIGNATURE**

DATE \_\_\_\_\_

Time

**SIGNATURE**

Date \_\_\_\_\_

Time



## Analytical Sciences

January 12, 2006

Karin Fresnel  
SCS Engineers  
3645 Westwind Blvd  
Santa Rosa, CA 95403

Dear Karin,

Enclosed you will find Analytical Sciences' final report 5121202 for your Schmidbauer project. An invoice for this work is enclosed.

Should you or your client have any questions regarding this report please contact me at your convenience. We appreciate you selecting Analytical Sciences for this work and look forward to serving your analytical chemistry needs on projects in the future.

Sincerely,

Analytical Sciences

Mark A. Valentini, Ph.D.

Laboratory Director



Report Date: January 12, 2006

## Laboratory Report

Karin Fresnel  
SCS Engineers  
3645 Westwind Blvd  
Santa Rosa, CA 95403

Project Name: **Schmidbauer** **01203316.00**  
Lab Project: **5121202**

This 5 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.  
Laboratory Director



### Chlorinated Phenols by Canadian Pulp Method in Water

Lab#	Sample ID	Compound Name	Result (ug/L)	RDL (ug/L)
5121202-01	MW-10	2,4,6-Trichlorophenol	6.0	1.0
		2,4,5-Trichlorophenol	130	1.0
		2,3,4-Trichlorophenol	ND	1.0
		2,3,5,6-Tetrachlorophenol	ND	1.0
		2,3,4,6-Tetrachlorophenol	290	1.0
		2,3,4,5-Tetrachlorophenol	10	1.0
		Pentachlorophenol	1600	10
Surrogates		Result (ug/L)	% Recovery	Acceptance Range (%)
2,4,6-Tribromophenol		682	85	30-150

Date Sampled:	12/09/05	Date Analyzed:	12/13/05	QC Batch: B000392
Date Received:	12/12/05	Method:	Canadian Pulp Method	



## Quality Assurance Report

### Chlorinated Phenols by Canadian Pulp Method in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch B000392 - EPA 3510C MS

##### Blank (B000392-BLK1)

Prepared & Analyzed: 12/09/05

2,4,6-Trichlorophenol	ND	1.0	ug/L
2,4,5-Trichlorophenol	ND	1.0	ug/L
2,3,4-Trichlorophenol	ND	1.0	ug/L
2,3,5,6-Tetrachlorophenol	ND	1.0	ug/L
2,3,4,6-Tetrachlorophenol	ND	1.0	ug/L
2,3,4,5-Tetrachlorophenol	ND	1.0	ug/L
Pentachlorophenol	ND	1.0	ug/L

Surrogate: 2,4,6-Tribromophenol 29.0 ug/L 26.7 109 30-150

##### LCS (B000392-BS1)

Prepared & Analyzed: 12/09/05

2,3,5,6-Tetrachlorophenol	5.20	1.0	ug/L	5.00	104	30-130
2,3,4,6-Tetrachlorophenol	5.40	1.0	ug/L	5.00	108	30-130
2,3,4,5-Tetrachlorophenol	5.33	1.0	ug/L	5.00	107	30-130
Pentachlorophenol	5.33	1.0	ug/L	5.00	107	30-130

Surrogate: 2,4,6-Tribromophenol 23.6 ug/L 26.7 88 30-130

##### LCS Dup (B000392-BSD1)

Prepared & Analyzed: 12/09/05

2,3,5,6-Tetrachlorophenol	5.13	1.0	ug/L	5.00	103	30-130	1	20
2,3,4,6-Tetrachlorophenol	5.27	1.0	ug/L	5.00	105	30-130	3	20
2,3,4,5-Tetrachlorophenol	5.20	1.0	ug/L	5.00	104	30-130	3	20
Pentachlorophenol	5.20	1.0	ug/L	5.00	104	30-130	3	20

Surrogate: 2,4,6-Tribromophenol 28.3 ug/L 26.7 106 30-130

##### Matrix Spike (B000392-MS1)

Source: 5120801-01

Prepared & Analyzed: 12/09/05

2,3,5,6-Tetrachlorophenol	5.20	1.0	ug/L	5.00	ND	104	30-150
2,3,4,6-Tetrachlorophenol	5.47	1.0	ug/L	5.00	ND	109	30-150
2,3,4,5-Tetrachlorophenol	5.33	1.0	ug/L	5.00	ND	107	30-150
Pentachlorophenol	5.67	1.0	ug/L	5.00	ND	113	30-150

Surrogate: 2,4,6-Tribromophenol 29.7 ug/L 26.7 111 30-150



## Chlorinated Phenols by Canadian Pulp Method in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B000392 - EPA 3510C MS</b>										
<b>Matrix Spike Dup (B000392-MSD1)</b>		<b>Source: 5120801-01</b>			<b>Prepared &amp; Analyzed: 12/09/05</b>					
2,3,5,6-Tetrachlorophenol	5.27	1.0	ug/L	5.00	ND	105	30-150	1	20	
2,3,4,6-Tetrachlorophenol	5.60	1.0	ug/L	5.00	ND	112	30-150	3	20	
2,3,4,5-Tetrachlorophenol	5.47	1.0	ug/L	5.00	ND	109	30-150	2	20	
Pentachlorophenol	5.80	1.0	ug/L	5.00	ND	116	30-150	3	20	
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>26.0</i>		<i>ug/L</i>	<i>26.7</i>		<i>97</i>	<i>30-150</i>			



## Notes and Definitions

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ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
RPD	Relative Percent Difference



Analytical Sciences  
P.O. Box 750336, Petaluma, CA 94975-0336  
110 Liberty Street, Petaluma, CA 94952  
(707) 769-3128  
Fax (707) 769-8093

# CHAIN OF CUSTODY

LAB PROJECT NUMBER: 5121202

CLIENT'S PROJECT NAME: Schmidbauer Lumber Co.

CLIENT'S PROJECT NUMBER: 01203316.00

CLIENT INFORMATION		BILLING INFORMATION	
COMPANY NAME: SCS ENGINEERS	CONTACT: RICH GRAHAM	COMPANY NAME: SCHMIDBAUER LUMBER CO.	
ADDRESS: 3645 WESTWIND BOULEVARD		ADDRESS: 1099 WATERFRONT DR.	
SANTA ROSA, CA 95403		EUREKA, CA	
CONTACT: KARIN FRESNEL	PHONE#:	PHONE#:	
(707) 546-9461		FAX #:	
FAX #: (707) 544-5769			

TURNAROUND TIME (check one)	
MOBILE LAB	
SAME DAY	
48 HOURS	
24 HOURS	
5 DAYS	NORMAL X

COOLER TEMPERATURE \_\_\_\_\_ °C

COC \_\_\_\_\_

GEOTRACKER EDF: Y N  
GLOBAL ID: \_\_\_\_\_

## ANALYSIS

ITEM	CLIENT SAMPLE I.D.	DATE SAMPLED	TIME	MATRIX	# CONT.	PRESV. YES/NO	PCP/TCP BY CANDIAN PULP	COMMENTS	LAB SAMPLE #
1	MW-1D	12/9	9:25	LQR	3	N	X	5121202-01 If PCP is detected Analyze for Chlorine + Fats	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									

PAGE 1 OF 1

## SIGNATURES

REQUISITIONED BY:	SAMPLED BY:	RECEIVED BY LABORATORY:
SIGNATURE	SIGNATURE	SIGNATURE
DATE	DATE	DATE
TIME	TIME	TIME

12/9/05 11:20  
12/12/05 11:20

December 28, 2005

**FAL Project ID: 3646**

Mr. Mark Valentini  
Analytical Sciences  
110 Liberty Street  
Petaluma, CA 94952

Dear Mr. Valentini,

Enclosed are the results for Frontier Analytical Laboratory project **3646**. This corresponds to your AS project number **5121202**. The one aqueous sample received on 12/16/2005 was extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. Analytical Sciences requested a turnaround time of fifteen business days for project **3646**.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains our project-sample tracking log, a qualifier reference guide, a ML/MDL form and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and a sample photo.

If you have any questions regarding project **3646**, please contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

*Dan Vickers*

Dan Vickers  
Vice President

## Frontier Analytical Laboratory

### Sample Tracking Log

FAL Project ID: **3646**

Received on: **12/16/2005**

Project Due: **01/11/2006** Storage: **R1**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
3646-001- SA	0	5121202	MW-10	EPA 1613 D/F	Aqueous	12/09/2005	09:25 am	12/09/2006

## Qualifier Reference Guide

- A Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
- B Analyte is present in Method Blank
- C Chemical Interference
- D Presence of Diphenyl Ethers
- E Analyte concentration is above calibration range
- F Analyte confirmation on secondary column
- J<sup>†</sup> Analyte concentration is below calibration range
- M Maximum possible concentration
- NP Not Provided
- S Sample acceptance criteria not met
- X Matrix interferences
- \* Result taken from dilution or reinjection
- Analyte Not Detected
- + Spike levels were inappropriate versus the levels in the sample

<sup>†</sup> "J" values are equivalent to DNQ (detected but not quantified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples

**EPA Method 1613/8290 Aqueous MDL  
(SPE Extraction)**



Analyte	ML	MDL
2,3,7,8-TCDD	5.00	0.543
1,2,3,7,8-PeCDD	25.0	0.771
1,2,3,4,7,8-HxCDD	25.0	0.845
1,2,3,6,7,8-HxCDD	25.0	1.05
1,2,3,7,8,9-HxCDD	25.0	0.910
1,2,3,4,6,7,8-HpCDD	25.0	1.18
OCDD	50.0	2.26
2,3,7,8-TCDF	5.00	0.449
1,2,3,7,8-PeCDF	25.0	1.05
2,3,4,7,8-PeCDF	25.0	1.08
1,2,3,4,7,8-HxCDF	25.0	0.545
1,2,3,6,7,8-HxCDF	25.0	0.355
1,2,3,7,8,9-HxCDF	25.0	0.370
2,3,4,6,7,8-HxCDF	25.0	0.476
1,2,3,4,6,7,8-HpCDF	25.0	0.516
1,2,3,4,7,8,9-HpCDF	25.0	0.654
OCDF	50.0	1.22

Project 3015, extracted 1/6/05; analyzed 1/12/05. Based on a 1.0 Liter sample, pg/L.

EPA Method 1613  
PCDD/F



FAL ID: 3646-001-MB  
Client ID: Method Blank  
Matrix: Aqueous  
Batch No: X0742

Date Extracted: 12-22-2005  
Date Received: NA  
Amount: 1.000 L

ICal: PCDDFAL1-8-30-05  
GC Column: DB5  
Units: pg/L

Acquired: 12-23-2005  
WHO TEQ: 0.00

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.48	-	-					
1,2,3,7,8-PeCDD	-	2.20	-	-					
1,2,3,4,7,8-HxCDD	-	4.29	-	-					
1,2,3,6,7,8-HxCDD	-	3.87	-	-	Total Tetra-Dioxins	- 1.48			0
1,2,3,7,8,9-HxCDD	-	3.40	-	-	Total Penta-Dioxins	- 2.20			0
1,2,3,4,6,7,8-HpCDD	-	3.24	-	-	Total Hexa-Dioxins	- 4.29			0
OCDD	-	4.95	-	-	Total Hepta-Dioxins	- 3.24			0
2,3,7,8-TCDF	-	0.823	-	-					
1,2,3,7,8-PeCDF	-	2.28	-	-					
2,3,4,7,8-PeCDF	-	2.17	-	-					
1,2,3,4,7,8-HxCDF	-	1.26	-	-					
1,2,3,6,7,8-HxCDF	-	0.971	-	-					
2,3,4,6,7,8-HxCDF	-	1.24	-	-					
1,2,3,7,8,9-HxCDF	-	1.35	-	-	Total Tetra-Furans	- 0.823			0
1,2,3,4,6,7,8-HpCDF	-	1.85	-	-	Total Penta-Furans	- 2.28			0
1,2,3,4,7,8,9-HpCDF	-	2.04	-	-	Total Hexa-Furans	- 1.35			0
OCDF	-	3.42	-	-	Total Hepta-Furans	- 2.04			0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	82.2	25.0 - 164	
13C-1,2,3,7,8-PeCDD	91.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	73.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	72.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	75.2	23.0 - 140	
13C-OCDD	73.5	17.0 - 157	
13C-2,3,7,8-TCDF	86.4	24.0 - 169	
13C-1,2,3,7,8-PeCDF	88.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	91.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	82.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	79.9	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	79.5	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	82.7	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	81.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	76.6	26.0 - 138	
13C-OCDF	76.4	17.0 - 157	

Cleanup Surrogate

37Cl-2,3,7,8-TCDD 95.3 35.0 - 197

Analyst: [Signature]  
Date: 12/27/05

Reviewed By: [Signature]  
Date: 12/28/2005

000005 of 000010

# EPA Method 1613 PCDD/F



FAL ID: 3646-001-OPR  
Client ID: OPR  
Matrix: Aqueous  
Batch No: X0742

Date Extracted: 12-22-2005  
Date Received: NA  
Amount: 1.000 L

ICal: PCDDFAL1-8-30-05  
GC Column: DB5  
Units: ng/ml

Acquired: 12-23-2005  
WHO TEQ: NA

Compound	Conc	QC Limits
2,3,7,8-TCDD	10.8	6.70 - 15.8
1,2,3,7,8-PeCDD	55.9	35.0 - 71.0
1,2,3,4,7,8-HxCDD	56.9	35.0 - 82.0
1,2,3,6,7,8-HxCDD	57.7	38.0 - 67.0
1,2,3,7,8,9-HxCDD	61.9	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	55.1	35.0 - 70.0
OCDD	117	78.0 - 144
2,3,7,8-TCDF	11.2	7.50 - 15.8
1,2,3,7,8-PeCDF	57.3	40.0 - 67.0
2,3,4,7,8-PeCDF	57.2	34.0 - 80.0
1,2,3,4,7,8-HxCDF	53.4	36.0 - 67.0
1,2,3,6,7,8-HxCDF	53.5	42.0 - 65.0
2,3,4,6,7,8-HxCDF	54.4	35.0 - 78.0
1,2,3,7,8,9-HxCDF	54.2	39.0 - 65.0
1,2,3,4,6,7,8-HpCDF	54.0	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	53.1	39.0 - 69.0
OCDF	106	63.0 - 170

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	78.1	20.0 - 175
13C-1,2,3,7,8-PeCDD	92.5	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	77.9	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	73.8	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	81.0	26.0 - 166
13C-OCDD	83.2	13.0 - 198
13C-2,3,7,8-TCDF	87.7	22.0 - 152
13C-1,2,3,7,8-PeCDF	92.7	21.0 - 192
13C-2,3,4,7,8-PeCDF	95.9	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	79.8	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	79.4	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	81.0	22.0 - 176
13C-1,2,3,7,8,9-HxCDF	85.3	17.0 - 205
13C-1,2,3,4,6,7,8-HpCDF	81.0	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	83.8	20.0 - 186
13C-OCDF	89.9	13.0 - 198

## Cleanup Surrogate

37Cl-2,3,7,8-TCDD	91.5	31.0 - 191
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Analyst: [Signature]

Date: 12/27/05

Reviewed By: DN

Date: 12/28/2005

# EPA Method 1613 PCDD/F



FAL ID: 3646-001-SA  
Client ID: MW-10  
Matrix: Aqueous  
Batch No: X0742

Date Extracted: 12-22-2005  
Date Received: 12-16-2005  
Amount: 0.851 L

ICal: PCDDFAL1-8-30-05  
GC Column: DB5  
Units: pg/L

Acquired: 12-23-2005  
WHO TEQ: 5640

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.11		-					
1,2,3,7,8-PeCDD	23.2	-	J	23.2					
1,2,3,4,7,8-HxCDD	1850	-		185					
1,2,3,6,7,8-HxCDD	20900	-		2090	Total Tetra-Dioxins	20.3	-		2
1,2,3,7,8,9-HxCDD	4970	-		497	Total Penta-Dioxins	907	-		12
1,2,3,4,6,7,8-HpCDD	279000	-		2790	Total Hexa-Dioxins	299000	-		7
OCDD	88000	-		8.800	Total Hepta-Dioxins	1040000	-		2
2,3,7,8-TCDF	-	1.17		-					
1,2,3,7,8-PeCDF	15.7	-	J	0.787					
2,3,4,7,8-PeCDF	5.66	-	J	2.83					
1,2,3,4,7,8-HxCDF	16.9	-	J	1.69					
1,2,3,6,7,8-HxCDF	17.6	-	J	1.76					
2,3,4,6,7,8-HxCDF	29.4	-	J	2.94					
1,2,3,7,8,9-HxCDF	89.0	-		8.90	Total Tetra-Furans	125	-		12
1,2,3,4,6,7,8-HpCDF	2410	-		24.1	Total Penta-Furans	268	-	D,M	13
1,2,3,4,7,8,9-HpCDF	54.2	-		0.542	Total Hexa-Furans	2570	-	D,M	14
OCDF	7300	-		0.730	Total Hepta-Furans	10500	-	D,M	4

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	67.4	25.0 - 164	
13C-1,2,3,7,8-PeCDD	82.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	62.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	63.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	91.4	23.0 - 140	
13C-OCDD	67.7	17.0 - 157	
13C-2,3,7,8-TCDF	68.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	66.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	73.7	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	72.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	72.7	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	67.3	28.0 - 136	
13C-1,2,3,7,8,9-HxCDF	70.4	29.0 - 147	
13C-1,2,3,4,6,7,8-HpCDF	63.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	61.7	26.0 - 138	
13C-OCDF	64.5	17.0 - 157	

## Cleanup Surrogate

37Cl-2,3,7,8-TCDD 90.9 35.0 - 197

Analyst: [Signature]

Date: 12/27/05

Reviewed By: [Signature]

Date: 12/28/2005

# Sample Receipt

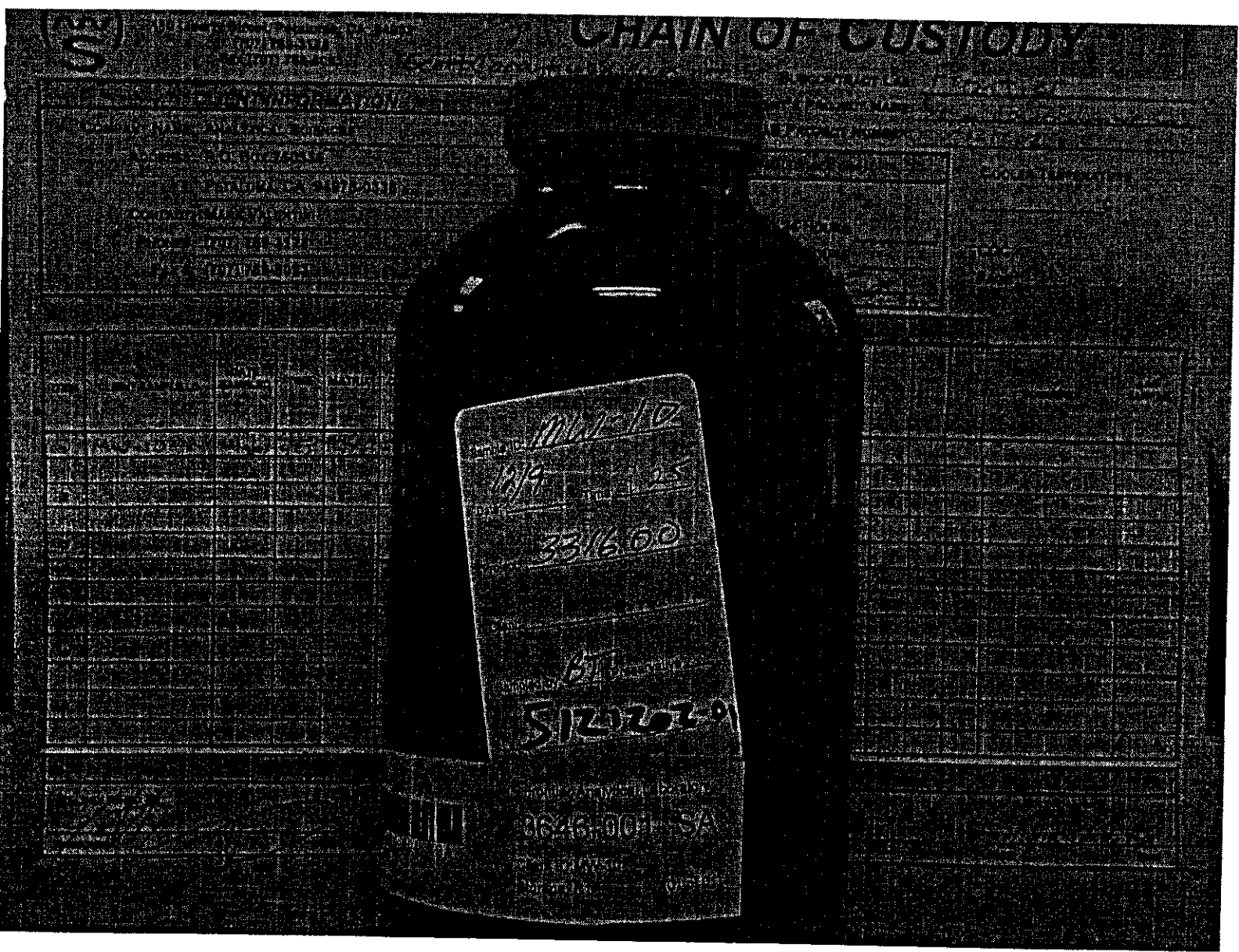
## Frontier Analytical Laboratory

### Sample Login Form

FAL Project ID: **3646**

Client:	Analytical Sciences
Client Project ID:	5121202
Date Received:	12/16/2005
Time Received:	09:45 am
Received By:	KZ
Logged In By:	KZ
# of Samples Received:	1
Duplicates:	0
Storage Location:	R1

Method of Delivery:	California Overnight
Tracking Number:	516647358
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	2
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	Yes
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	12/09/2006
Adequate Sample Volume	Yes
Anomalies or additional comments:	



## **Appendix C**

**Certificate of Disposal: IWM Job # 95579-DS: dated 19 January 2006**

**Certificate of Disposal: IWM Job # 95589-DW: dated 19 January 2006**

**IWM, Inc.**

INTEGRATED WASTESTREAM MANAGEMENT, INC.  
950 AMES AVENUE, MILPITAS, CA 95035  
PHONE: 408.942.8955 FAX: 408.942.1499

## CERTIFICATE OF DISPOSAL

Generator Name: Schmidbauer Lumber  
Address: P.O. Box 152  
Eureka, CA 95501  
Contact: Mark Anderson  
Phone: 707-443-7024

Facility Name: Schmidbauer Lumber  
Address: 1099 Waterfront Drive  
Eureka, CA  
Facility Contact: Amy Yardley, SCS Engineers  
Phone: 707-546-9461

IWM Job #:	<u>95579-DS</u>
Description of Waste:	<u>3 Drums of</u>
	<u>Non-Hazardous</u>
	<u>Soil</u>
Removal Date:	<u>01/19/06</u>
Ticket #:	<u>RSVRL190106</u>

### Transporter Information

Name: IWM, Inc.  
Address: 950 Ames Avenue  
Milpitas, CA 95035  
Phone: (408) 942-8955

### Disposal Facility Information

Name: Republic Services Vasco Road Landfill  
Address: 4001 N. Vasco Road  
Livermore, CA 94550  
Phone: (925) 447-0491

IWM, INC. CERTIFIES THAT THE ABOVE LISTED NON-HAZARDOUS WASTE WILL BE TREATED AND DISPOSED AT THE DESIGNATED FACILITY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

William T. DeLon

Authorized Representative (Print Name and Signature)

01/19/06

Date

**IWM, Inc.**

INTEGRATED WASTESTREAM MANAGEMENT, INC.  
950 AMES AVENUE, MILPITAS, CA 95035  
PHONE: 408.942.8955 FAX: 408.942.1499

## CERTIFICATE OF DISPOSAL

Generator Name: Schmidbauer Lumber  
Address: P.O. Box 152  
Eureka, CA 95501  
Contact: Mark Anderson  
Phone: 707-443-7024

Facility Name: Schmidbauer Lumber  
Address: 1099 Waterfront Drive  
Eureka, CA  
Facility Contact: Amy Yardley, SCS Engineers  
Phone: 707-546-9461

IWM Job #:	<u>95580-DW</u>
Description of Waste:	<u>4 Drums of</u> <u>Non-Hazardous</u> <u>Water</u>
Removal Date:	<u>01/19/06</u>
Ticket #:	<u>SP190106-MISC</u>

### Transporter Information

Name: IWM, Inc.  
Address: 950 Ames Avenue  
Milpitas, CA 95035  
Phone: (408) 942-8955

### Disposal Facility Information

Name: Seaport Refining & Environmental  
Address: 675 Seaport Blvd  
Redwood City, CA 94063  
Phone: (650) 364-1024

IWM, INC. CERTIFIES THAT THE ABOVE LISTED NON-HAZARDOUS WASTE WILL BE  
TREATED AND DISPOSED AT THE DESIGNATED FACILITY IN ACCORDANCE WITH  
APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

William T. DeLon

Authorized Representative (Print Name and Signature)

01/19/06

Date